International Health Regulations Implementation and Disease Surveillance in Indonesia: An Analysis of Law No. 17 of 2023

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This article examines how Law No. 17 of 2023 translates International Health Regulations (IHR) obligations into Indonesia's disease surveillance governance. The article uses Global Health Governance and the idea of global governance as state transformation to explain how international standards become operational through domestic legal and institutional change. Methodologically, the article adopts a qualitative single-case study design and uses a structured desk review of Law No. 17 of 2023, WHO assessments, Indonesian policy documents, surveillance evaluations, and relevant academic literature. The findings show that Law No. 17 of 2023 strengthens Indonesia's formal surveillance architecture by embedding screening and surveillance within primary health care, clarifying central and regional government responsibilities, supporting laboratory-based detection, integrating health information systems, linking surveillance with outbreak preparedness and emergency response, and recognizing multisectoral coordination for communicable disease control. However, the law's practical effect remains constrained by decentralization, unequal subnational capacity, weak infrastructure in remote areas, fragmented data systems, limited interoperability, workforce shortages, and coordination problems across sectors and levels of government. The article implies that Law No. 17 of 2023 represents an important domestic legal translation of IHR obligations, but legal formalization alone is insufficient to ensure surveillance performance. Stronger operational consolidation is still needed so that surveillance can function consistently across Indonesia's institutions, territories, and sectors.

Keywords: International Health Regulations; disease surveillance; Indonesia; global health governance

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1. Introduction

Disease surveillance sits at the core of contemporary global health security because outbreaks can no longer be treated as isolated national events. The International Health Regulations (IHR) were designed to strengthen countries' capacities to detect, assess, report, and respond to public health threats that may spread internationally, thereby linking national surveillance performance to broader systems of international preparedness and cooperation [1], [2]. In this setting, disease surveillance is a practical system for producing timely information that can guide prevention, early warning, and response [3], [4]. Its importance has grown alongside the acceleration of mobility, trade, and cross-border interaction, which allow pathogens to move faster and more widely than many conventional public health arrangements were originally designed to manage [5], [6]. For that reason, surveillance has become one of the most operationally important foundations of IHR implementation.

The IHR, however, do not implement itself. Their strength depends on how international obligations are translated into domestic legal, institutional, and administrative arrangements. This point is central to the study of global health governance. Rather than operating mainly through direct international enforcement, global health governance often works by setting standards, priorities, and benchmarks that states are expected to incorporate into national systems. In the case of disease surveillance, this means that IHR obligations only become operational when domestic frameworks define who is responsible for detection, reporting, data management, emergency response, and coordination. National law, therefore, becomes an important site for examining whether global health obligations are merely acknowledged or meaningfully embedded into governance practice. In Indonesia, Law No. 17 of 2023 on Health is especially important in this regard because it provides a broad legal framework for national health governance, including the state's responsibility to prevent, detect, and respond to communicable disease threats.

Indonesia offers a particularly revealing case for examining this relationship between global health obligations and domestic legal translation. It is one of the world's largest and most complex health governance settings, with more than 262 million inhabitants distributed across 17,744 islands and governed through a decentralized administrative structure that now includes 34 provinces and 514 districts or cities [7], [8]. These conditions make coordination, reporting, monitoring, and emergency response unusually demanding [9]. The problem is not geographical scale alone. Decentralization has also contributed to wide variation in institutional capacity, service delivery, and public health performance across regions, while persistent inequalities in infrastructure, human resources, and preparedness remain especially visible in eastern provinces such as Papua [7]. At the same time, Indonesia's biodiversity, dense human-animal interaction, and exposure to emerging zoonotic threats make surveillance a central state function rather than a peripheral one [10]. As the 2023 Joint External Evaluation notes, these structural conditions require strong national coordination, interoperable systems, and sustained cross-sector collaboration if IHR core capacities are to function effectively across the archipelago [8].

Moreover, existing scholarship has already provided important insights into different parts of this problem, but the discussion remains fragmented. Studies of Indonesia's broader health system have shown how decentralization increased institutional heterogeneity and widened implementation gaps across districts, even as national reforms sought to improve access and standardization [7]. Research on Indonesia's COVID-19 response has also shown that surveillance, laboratory expansion, data management, and subnational coordination were all rapidly transformed during the pandemic, while still facing serious challenges related to fragmented reporting, uneven local capacity, and staffing limitations [1], [11]. More specific evaluations of surveillance instruments such as the Early Warning Alert and Response System have likewise shown that national systems can improve early detection and coordination, yet remain constrained by limited representativeness, lack of training, poor connectivity, and weak infrastructure in remote regions [12], [13], [14]. Meanwhile, wider studies on IHR implementation have shown that countries often struggle to convert international obligations into consistent domestic capacities, especially when surveillance systems depend on fragmented institutions and uneven local implementation [15]. What remains less developed is a focused analysis of how Indonesia's new health Law No. 17 of 2023 translates IHR-related surveillance obligations into domestic governance.

This article addresses that gap by asking the following research question: How does Law No. 17 of 2023 translate International Health Regulations obligations into Indonesia's disease surveillance governance? It argues that Law No. 17 of 2023 represents an important domestic legal instrument for translating IHR obligations into Indonesia's disease surveillance governance. The law strengthens the formal basis for surveillance, emergency response, health information systems, and intergovernmental coordination.

However, its practical effect remains constrained by the same implementation problems that characterize global health governance more broadly: uneven state capacity, fragmented authority, weak data integration, and uneven subnational performance. In this sense, the article examines the law as a site where international health security obligations are translated into national legal authority and where the gap between legal formalization and surveillance performance becomes visible.

2. Literature Review and Problem Statement

Disease surveillance is commonly understood as the ongoing and systematic collection, analysis, interpretation, and dissemination of health data for public health action. In this sense, surveillance is a practical process through which health events are converted into actionable information for prevention, early warning, investigation, and response [5], [16], [17]. Castillo-Salgado [17] emphasizes that surveillance is central to disease prevention and control because it generates population-level knowledge on morbidity, mortality, trends, and risk factors that can guide intervention and evaluation. This understanding is especially important in the context of infectious diseases, where delays in detection or information sharing can quickly increase the scale of an outbreak. Surveillance, therefore, functions as one of the most basic institutional capacities of public health systems because it links information to decision-making and enables authorities to respond before transmission expands further.

Under the International Health Regulations, this public health role is expanded into a broader governance function. The IHR establish a legally binding framework for states to prevent, detect, assess, notify, and respond to events that may pose risks beyond national borders. As Aisyah et al. [1] note, the IHR require countries to report public health events to the World Health Organization and to build surveillance and response capacities capable of managing outbreaks and other health emergencies. Surveillance here, therefore, becomes part of a wider architecture of international responsibility, in which national detection and reporting systems contribute to regional and global health security. In this framework, governments are expected to maintain systems that monitor domestic disease patterns and generate timely, credible, and communicable intelligence to support collective preparedness and response.

The IHR shapes national surveillance systems by defining the institutional and operational capacities that states are expected to develop and maintain. At the most basic level, they establish core capacity expectations for surveillance and response across local, intermediate, and national levels [18], [19]. As the WHO's review of IHR implementation observed, the revised regulations led many countries to strengthen surveillance, risk assessment, response capacity, and reporting procedures, although these capacities have remained uneven and incomplete in many settings [2], [20]. This is important because the IHR shifts surveillance from a discretionary domestic policy function into an internationally recognized obligation [19]. National systems are expected to identify unusual events, assess their significance, and respond in ways that are timely, coordinated, and compatible with international notification requirements [21].

Moreover, this article situates that process within the concept of Global Health Governance, especially the idea of global governance as state transformation. Jones and Hameiri [22] argue that global governance rarely operates through direct supranational enforcement. Instead, international organizations and global regimes usually act as meta-governors that define priorities, standards, benchmarks, and best-practice models, while domestic institutions remain responsible for implementation. This concept is useful for understanding the IHR because the regulations set expectations for surveillance, reporting, preparedness, and response, while states must translate those expectations into domestic legal and institutional arrangements. From this perspective, the effectiveness of global health governance depends less on the

existence of international rules alone and more on whether domestic institutions have the authority, capacity, coordination, and resources to make those rules operational.

This conceptual framing is especially relevant for Indonesia because the country's IHR implementation depends on domestic legal transformation within a decentralized and geographically complex state. Law No. 17 of 2023 on Health is therefore important because it can be read as a key legal instrument through which Indonesia seeks to translate IHR-related surveillance obligations into national health governance. Hence, to examine this process, the article draws on an analytical lens adapted from Chandran et al. [23], which emphasizes the importance of legal and policy foundations, institutional arrangements, operational capacity, data systems, and implementation contexts in surveillance governance. This framework is appropriate because surveillance systems do not operate in an institutional vacuum. They depend on legal mandates, administrative authority, financing arrangements, information systems, and policy instruments that define responsibilities across levels of government.

3. Method

This article adopts a qualitative research approach and uses a single-case study design focused on Indonesia. The case study design is appropriate because the article examines how one national legal framework, Law No. 17 of 2023 on Health, translates International Health Regulations obligations into Indonesia's disease surveillance governance [24], [25]. The qualitative approach is also suitable because the article relies on documentary sources to examine how global health rules are incorporated into national governance practice [24], [25].

Data collection was conducted through a structured desk review. Following Barbieri et al. [26], the desk review was organized as a structured but iterative process to identify, screen, and analyze legal, policy, institutional, and academic sources relevant to the research question. The review focused on materials related to Law No. 17 of 2023, IHR implementation, disease surveillance, health information systems, emergency preparedness, and Indonesia's health security governance.

The data collection process proceeded in three stages. First, an exploratory search was conducted to map the main documents, institutions, and policy instruments relevant to Law No. 17 of 2023 and disease surveillance in Indonesia. Second, a targeted search was carried out using recurring keywords related to Law No. 17 of 2023, International Health Regulations, disease surveillance, communicable disease control, health information systems, emergency response, Joint External Evaluation, National Action Plan for Health Security, EWARS, and One Health. Third, the collected materials were screened for relevance. Sources were included when they directly addressed the legal framework, institutional design, surveillance function, health emergency response, data governance, or implementation context of disease surveillance in Indonesia. Sources were excluded when they were not directly related to IHR implementation, Law No. 17 of 2023, or disease surveillance governance. Cross-referencing was also used to identify additional relevant documents.

Data were analyzed using thematic analysis following Braun and Clarke [27]. Thematic analysis was selected because the study seeks to identify recurring patterns across documentary materials and interpret how legal and institutional arrangements shape surveillance governance [27], [28]. The analysis followed Braun and Clarke's six-phase process, with Byrne's [29] worked example used as practical guidance for coding and theme development. The analysis began with repeated reading of the collected materials to build familiarity with the dataset. The next stage involved generating initial codes related to the research question, including codes on legal authority, surveillance obligations, health information systems,

emergency preparedness, intergovernmental coordination, One Health, and implementation constraints. These codes were then grouped into candidate themes and reviewed against the dataset as a whole. The final themes were refined and organized around the article's core analytical concern: how Law No. 17 of 2023 translates IHR obligations into Indonesia's disease surveillance governance and what implementation gaps remain [27], [29].

4. Results and Discussion

Translating IHR Obligations Through Law No. 17 of 2023

Law No. 17 of 2023 occupies a central position in Indonesia's recent health system reform because it reorganizes the legal foundation of national health governance into one broad framework. The law is designed to strengthen health development, reduce inequality, improve health service quality, and increase health resilience in facing extraordinary events and outbreaks. In relation to disease surveillance, this is important because surveillance depends on the ability of the state to connect health services, health workers, laboratories, health information systems, financing, emergency response, and intergovernmental coordination. The Law No. 17 of 2023, therefore, provides a domestic legal foundation for several functions already emphasized by the International Health Regulations, especially detection, assessment, reporting, response, and coordination [2], [3], [8], [15].

The law strengthens the legal basis of surveillance by first defining key terms that are central to outbreak governance. It defines outbreaks, outbreak preparedness, extraordinary events, points of entry, quarantine health officers, affected areas, central government, regional government, and village government. These definitions matter because surveillance requires shared legal categories that allow authorities to identify epidemiological events, determine institutional responsibility, and activate response mechanisms. The law also states that health administration aims to strengthen health resilience in facing extraordinary events and outbreaks. Through this formulation, surveillance is placed within a wider legal framework of preparedness and health security.

The law also assigns responsibility for surveillance-relevant governance across levels of government. It gives the central and regional governments responsibility for planning, regulating, implementing, supervising, and monitoring health efforts. More specifically, it assigns both levels of government responsibility for outbreak preparedness, outbreak response, and post-outbreak activities. This arrangement is important in Indonesia's decentralized system because IHR-related surveillance capacity cannot be implemented only through central policy. It requires legal authority that connects national standards with regional execution. In that respect, Law No. 17 of 2023 gives Indonesia a legal route for embedding IHR-related obligations into multilevel health governance [8].

Another important finding is that the law embeds surveillance into primary health care. Article 31 places screening and surveillance within preventive services under integrated primary health care. This means that surveillance is attached to routine frontline health services, where risks can be detected earlier. Article 32 then strengthens this arrangement by requiring primary health care to operate through coordinated networks, including administrative, educational, workplace, referral, and cross-sector networks. The same article requires data connectivity within these networks and integration with the National Health Information System. This provision creates a legal basis for connecting local service delivery, community networks, and data flows in support of disease surveillance.

The law further strengthens laboratory-based surveillance. Article 33 states that primary health care is supported by health laboratories, including medical laboratories, public health laboratories, and other

laboratories determined by the minister. It also requires public health laboratories to be arranged in levels and assigns the central and regional governments the responsibility for providing and operating public health laboratories. This is directly relevant to IHR implementation because surveillance needs laboratory confirmation to transform early signals into reliable public health action. WHO [8] similarly emphasizes that surveillance, laboratories, and emergency response are interdependent capacities within IHR implementation.

Law No. 17 of 2023 also provides a direct legal foundation for communicable disease control. Articles 86 to 91 state that the central government, regional governments, and society are responsible for communicable and noncommunicable disease control. Article 89 states that communicable disease control includes prevention, control, and eradication, and allows authorized medical and health personnel to examine people suspected of infection or disease risk and places suspected of containing vectors or other disease sources. These provisions connect detection, field investigation, risk identification, and response authority within one legal framework. They are consistent with the IHR expectation that states must be able to detect unusual health events, assess their significance, and respond before wider transmission occurs [1], [8].

Finally, the law broadens surveillance beyond the human health sector. Article 91 requires communicable disease control to be coordinated and integrated with animal health, agriculture, environment, and other sectors. This provision gives legal support to a One Health-oriented approach. It is consistent with Indonesia's existing surveillance architecture, which includes EWARS for human health, iSIKHNAS for domestic animal health, SEHAT SATLI for wildlife surveillance, and the SIZE platform for zoonotic and emerging infectious disease analysis [1], [8]. Through this provision, the law gives domestic legal recognition to the multisectoral coordination required for emerging infectious disease surveillance.

Furthermore, in terms of the relation with IHR, Law No. 17 of 2023 translates IHR surveillance obligations by turning broad international expectations into domestic legal authority. The IHR require states to develop capacities for detecting, assessing, notifying, and responding to public health risks [2]. In Law No. 17 of 2023, this logic appears in the placement of surveillance within preventive services, primary health care, communicable disease control, health information governance, and outbreak response. Article 31 is especially important because it places screening and surveillance at the primary care level, which is the closest point of contact between the health system and the community. This arrangement supports earlier detection and links surveillance to everyday health service delivery.

The law also translates IHR obligations by clarifying multilevel responsibility. The central government is responsible for national planning, national policy, program coordination, standards, and health resource distribution. Regional governments are responsible for local policy, program management, supervision, monitoring, and evaluation, while still referring to national norms, standards, procedures, and criteria. This arrangement reflects the IHR requirement that surveillance capacities must exist at national, intermediate, and local levels, although Indonesia expresses this requirement through its own decentralized administrative structure [8].

In addition, the law translates preparedness and response obligations into health governance. It states that health administration aims to strengthen health resilience in facing extraordinary events and outbreaks, and it assigns central and regional governments responsibility for outbreak preparedness, outbreak response, and post-outbreak activities. This legal structure aligns with earlier IHR-related reforms in Indonesia. The Joint External Evaluation identified Indonesia's capacities and gaps in surveillance, preparedness, coordination, and response [8]. The National Action Plan for Health Security then translated JEE findings

into activities, indicators, and planning arrangements within Indonesia's health security agenda [20]. Law No. 17 of 2023 gives these directions stronger statutory grounding.

The law also strengthens the connection between surveillance and emergency response capacity. Article 173 requires health facilities to provide health services during extraordinary events or outbreaks as part of response efforts. Article 238 establishes health reserve personnel to support health resilience and to be mobilized during extraordinary events, outbreaks, and disaster emergencies, with registration and credentialing supported by information technology integrated with the National Health Information System. These provisions are relevant because surveillance only becomes useful when signals can trigger personnel mobilization, service delivery, laboratory confirmation, and coordinated response. Indonesia's COVID-19 experience showed the importance of this linkage, especially through the expansion of central data management, laboratory integration, epidemiological investigation, contact tracing, and NAR TC-19 [1].

Another major translation concerns health data governance. The law defines the Health Information System as a system that integrates information processing, reporting, and use to improve health administration and support decision-making. It also defines the National Health Information System as the ministry-managed system that integrates and standardizes health information systems. Several provisions operationalize this logic. Article 32 requires data connectivity in primary care networks. Article 39 links referral systems to information and communication technology integrated with the National Health Information System. Article 173 requires health facilities to report through the Health Information System, while Article 190 requires hospitals to implement hospital information systems integrated with the national system. These provisions show that Law No. 17 of 2023 translates IHR information-sharing expectations into a legal basis for integrated and standardized data flows.

Although Law No. 17 of 2023 strengthens the legal foundation of disease surveillance, several implementation gaps remain to be noted. The first gap concerns decentralization and uneven subnational capacity. The law assigns significant responsibility to central and regional governments, but surveillance performance still depends heavily on local implementation. Agustina et al. [7] show that decentralization has produced major variation in health system capacity, service quality, and institutional performance across districts and provinces. WHO [8] also notes that Indonesia's geographic complexity and decentralized government structure make rapid information sharing and emergency response difficult. Therefore, the law strengthens legal authority, yet its practical effect still depends on whether regional governments have sufficient resources, personnel, infrastructure, and administrative capacity.

The second gap concerns remote-area infrastructure and surveillance representativeness. The law requires the provision of health service access across Indonesia, including remote, border, and island areas. However, evidence from EWARS implementation in West Papua shows that legal obligations do not automatically ensure effective surveillance coverage. Muscatello et al. [12] found that EWARS improved coordination and rapid disease reporting, but participation in some areas remained low because of poor mobile and internet infrastructure, limited funding, insufficient training, and staff turnover. This reduces representativeness and may leave outbreaks in remote areas underdetected.

The third gap concerns fragmented data systems and interoperability. Law No. 17 of 2023 creates a strong legal basis for integrated health information systems, but previous implementation evidence shows that data integration remains difficult. Aisyah et al. [1] found that during COVID-19, separate applications and reporting systems developed by different institutions and subnational governments produced fragmented datasets that later had to be extracted and reintegrated. Januraga and Harjana [30] also showed that public COVID-19 data in Indonesia lacked several epidemiologically important details, which limited transparency

and independent analysis. Thus, the law creates a stronger legal foundation for integration, but practical interoperability still requires shared standards, consistent reporting, and operational coordination.

The fourth gap concerns workforce capacity. Law No. 17 of 2023 recognizes health workers as central health resources and requires central and regional governments to plan, provide, deploy, and distribute medical and health personnel. However, surveillance depends on personnel who can collect, verify, analyze, and act on health data. Muscatello et al. [12] identified limited epidemiological training, insufficient staff, competing duties, and staff turnover as barriers to EWARS implementation. Aisyah et al. [1] also showed that Indonesia's pandemic response faced challenges in data input, quality control, and trained personnel. Therefore, workforce provisions in the law need effective implementation at the subnational level.

The fifth gap concerns coordination across sectors and institutions. The law requires communicable disease control to be coordinated with animal health, agriculture, environment, and other sectors. Formal coordination provisions, however, must still be translated into clear operational routines. Rim et al. [20] show that Indonesia's post-JEE planning sought to strengthen multisectoral preparedness, while WHO [8] still identifies coordination, information sharing, and decision-making as continuing priorities. Accordingly, Law No. 17 of 2023 strengthens formal coordination, but effective surveillance still depends on clear roles, shared procedures, interoperable systems, and sustained communication.

What does the Indonesian case tell us about IHR and Global Health Governance?

At a glance, the findings of this article show that Law No. 17 of 2023 is best understood as a domestic legal mechanism through which Indonesia translates International Health Regulations obligations into disease surveillance governance. This is where the findings connect most directly with the concept of Global Health Governance. The IHR provide international expectations for detection, assessment, notification, reporting, preparedness, response, and coordination. These expectations, however, cannot become operational through international rules alone. They require domestic legal and institutional arrangements that define authority, responsibility, data flows, health service functions, and coordination mechanisms inside the state. Law No. 17 of 2023 performs this role by embedding surveillance into primary health care, communicable disease control, laboratory support, health information systems, outbreak preparedness, emergency response, and multisectoral coordination. In this sense, the law shows how global health governance operates through domestic legal transformation.

This finding is consistent with Jones and Hameiri's concept of global governance as state transformation. Their argument explains that global governance rarely works through direct supranational control. Instead, global governance often works by shaping domestic state institutions through standards, benchmarks, policy models, and technical expectations [22]. The Indonesian case reflects this logic. The IHR do not directly operate Indonesia's surveillance system. They create a global standard of what a capable surveillance system should be able to do. That standard is then translated through national instruments, most importantly the Law No. 17 of 2023 [8], [12], [20]. Law No. 17 of 2023, therefore, can be read as part of a broader process through which international health security obligations are incorporated into Indonesia's domestic legal architecture.

This also clarifies the article's contribution to the literature on IHR implementation. Previous studies have shown that the IHR can shape national institutions by clarifying obligations, encouraging planning, strengthening surveillance capacities, and increasing the visibility of health security within national policy agendas [1], [8], [20]. The findings here support that view, but they make the process more specific. They show that the key site of translation is domestic law. Through Law No. 17 of 2023, IHR-related expectations are no longer expressed only as international commitments or technical assessment categories. They are

incorporated into legal provisions on primary care surveillance, outbreak governance, health laboratories, health information systems, emergency response, and cross-sector coordination. This means that global health governance becomes visible in the internal organization of the state.

At the same time, the findings also show that legal translation is necessary, although it remains insufficient for ensuring functional surveillance performance. Law No. 17 of 2023 strengthens the formal architecture of surveillance, but its practical effect still depends on whether Indonesia can implement the law across a decentralized and geographically uneven system. This point closely fits Jones and Hameiri's critique of global governance. Global governance can create standards, plans, and formal frameworks that appear coherent at the national level, while implementation still depends on political-administrative conditions, institutional capacity, and resources on the ground [22]. The Indonesian case illustrates this problem clearly. The law creates a stronger legal basis for surveillance, yet the system still faces uneven local capacity, fragmented data systems, weak infrastructure in remote areas, limited interoperability, and workforce constraints [1], [7], [12].

This point is especially important because Indonesia already has several formal mechanisms associated with IHR implementation. The JEE assessed national core capacities. The NAPHS translated assessment findings into planning priorities. EWARS strengthened early warning and reporting. The Public Health Emergency Operations Centre linked surveillance with emergency coordination. One Health mechanisms recognized the importance of animal health, wildlife, and environmental risks [1], [8], [20]. Law No. 17 of 2023 adds a stronger statutory foundation to these arrangements. However, the existence of formal instruments does not guarantee that surveillance works consistently in everyday practice. Surveillance remains effective only when information can be detected, verified, analyzed, shared, and acted upon across different levels of government and across diverse territorial settings.

The findings, therefore, support a shift from legal compliance to system performance as the main basis for analyzing disease surveillance governance. A compliance-based view would emphasize whether Indonesia has adopted laws, plans, institutions, and reporting systems that reflect IHR expectations. Such formal compliance is important because it creates authority and structure. However, the Indonesian case shows that a deeper assessment must examine whether those arrangements function across space, sectors, and levels of government. The West Papua EWARS evaluation is important here because it shows that an early warning system can be legally and institutionally recognized, while still facing low reporting participation due to weak connectivity, limited training, insufficient funding, and staff turnover [12]. This shows that surveillance capacity cannot be understood only through national frameworks. Rather, it must also be assessed through its practical ability to produce timely and representative information.

The broader relevance of this case lies in its implications for other decentralized and geographically complex states. Indonesia shows that the translation of global health obligations into domestic law is only the first stage of implementation. States with large territories, uneven infrastructure, diverse local capacities, and decentralized authority face additional challenges in turning national legal frameworks into consistent surveillance performance. In these settings, legal reform may create a stronger national architecture, but surveillance still depends on local health offices, frontline facilities, laboratories, reporting networks, trained personnel, and digital connectivity. This means that global health governance analysis should pay greater attention to the territorial and administrative conditions under which international obligations are implemented.

Finally, the findings show that governance architecture itself should be treated as a public health capacity. Disease surveillance depends on laws, but it also depends on coordination, interoperability, workforce

distribution, laboratory networks, and local implementation routines. Law No. 17 of 2023 strengthens Indonesia's legal foundation for IHR-related surveillance governance, yet the findings suggest that the central challenge now lies in operational consolidation. For Indonesia and similar states, the key issue is how to make domestic legal transformation work across uneven territory and fragmented authority. In that sense, the findings demonstrate both the promise and the limits of global health governance through domestic law. It confirms that international obligations can reshape national legal systems, while also showing that system performance depends on the practical capacity of the state to make those legal commitments function in everyday surveillance practice.

5. Conclusion

This article examined how Law No. 17 of 2023 translates the International Health Regulations' obligations into Indonesia's disease surveillance governance. The findings show that the law functions as an important domestic legal mechanism for embedding IHR-related expectations into Indonesia's national health system. More specifically, Law No. 17 of 2023 strengthens the legal basis for surveillance by placing screening and surveillance within primary health care, formalizing central and regional government responsibilities for outbreak preparedness and response, supporting laboratory-based detection, requiring integration with the National Health Information System, and recognizing multisectoral coordination for communicable disease control, including coordination with animal health, agriculture, environment, and other sectors. In this sense, the law translates IHR obligations into domestic governance by turning broad international expectations on detection, reporting, preparedness, response, and coordination into national legal authority and institutional responsibilities.

The article, however, also finds that legal translation does not automatically produce effective surveillance performance. Although Law No. 17 of 2023 strengthens Indonesia's formal surveillance architecture, its practical effect remains shaped by long-standing implementation constraints. These include decentralization, uneven subnational capacity, weak infrastructure in remote and island areas, fragmented data systems, limited interoperability, workforce limitations, and coordination difficulties across sectors and levels of government. Therefore, the main finding of this article is that Law No. 17 of 2023 advances Indonesia's formal alignment with IHR surveillance obligations, while the realization of those obligations still depends on the state's ability to make legal mandates function across a decentralized and geographically complex system.

These findings have broader implications for the study of global health governance. Conceptually, the article shows that the IHR operate through domestic legal transformation rather than direct international enforcement. This supports the idea of global governance as state transformation, where international standards, benchmarks, and expectations reshape domestic institutions through national laws, policies, and administrative arrangements. At the same time, the article also confirms that this transformation remains incomplete when legal reform is not matched by operational capacity. For that reason, disease surveillance should be assessed not only through legal compliance or institutional design, but also through system performance, especially the ability to detect, report, analyze, and respond to health threats across different territories and institutions.

The article also has practical relevance beyond Indonesia. Other decentralized and geographically complex states may face similar challenges when translating international health obligations into domestic legal and institutional systems. National health laws can create stronger authority and clearer responsibilities, but surveillance effectiveness still depends on local implementation, data integration, laboratory capacity,

trained personnel, and coordination across sectors. The Indonesian case, therefore, suggests that global health governance should pay closer attention to the domestic conditions that determine whether international obligations become operational in practice.

Lastly, nonetheless, this article has several limitations. It relies on a qualitative single-case study design and uses desk review as its main data collection strategy. As a result, the analysis is based on publicly available legal documents, policy materials, institutional reports, surveillance evaluations, and academic studies. It does not include interviews, direct field observation, or access to internal administrative materials. Future research could build on this study by using interviews, comparative subnational fieldwork, or multi-case analysis to examine how Law No. 17 of 2023 is implemented across provinces and districts. Even with these limitations, the article shows that Law No. 17 of 2023 is an important step in Indonesia's domestic translation of IHR obligations, while also demonstrating that the future strength of disease surveillance will depend on the operational consolidation of law, institutions, data systems, workforce capacity, and subnational implementation.

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