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In search of a better tuberculosis governance in village level: A regulatory analysis in Indonesia

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ABSTRACT

Background: Amid the high prevalence of Tuberculosis (TB) in Indonesia, Presidential Regulation No. 67 of 2021 introduces new hope by emphasizing a multi-sectoral and multi-stakeholder approach, highlighting the potential for greater involvement of village governments.
Aims: This article explores opportunities and challenges for strengthening the role of village governments in TB control through a review of relevant regulations.
Methods: A desk study approach was employed, using a policy analysis framework.
Results: The regulation underscores the government's commitment to combating TB through a comprehensive approach that engages various sectors and stakeholders, including governments at all levels, the private sector, academia, and civil society. A key aspect of the regulation is its emphasis on involving village governments in TB governance. To date, village governments have had limited involvement, with TB management largely remaining under the purview of health offices. The Presidential Regulation attempts to position village governments, as the closest administrative unit to communities, as an integral part of the TB elimination mission. In the Indonesian context, this is a breakthrough. However, regulatory analysis found that there is still a need to produce derivative regulations to realize the empowered roles of village governments and enable them **to incorporate** TB-responsive strategies into their development planning.
Conclusion: As such, the Presidential Regulation marks a significant step forward in enhancing the role of village governments in TB control; however, further regulatory support is necessary to realize its full potential.

1. Introduction

Tuberculosis (TB) control efforts in Indonesia have been ongoing since the post-independence era. Despite these efforts, TB remains a significant challenge for the Government of Indonesia (GoI) due to its high annual case rate[1]; p. 307). TB is deeply intertwined with socio-economic factors[2]; p. 103). Data from the Ministry of Health (2021) indicate that TB prevalence is higher among males, who are more likely to smoke and engage in public activities, and among the elderly, whose weaker immune systems make them more susceptible to the disease[3]; p. 11).

Poverty, low education, low income, and unemployment[4] are among the key socio-economic factors influencing TB prevalence. Poverty, in particular, is considered one of the most significant determinants, as it is associated with low body resistance, inadequate housing, and an unhealthy environment.[5] A study found that a 10 % increase in the proportion of low-income households could raise the proportion of TB-affected households by 3 % within a district. According to the National Bureau of Statistics (2024), as of September 2024, 20.06 million people in Indonesia—equivalent to 8.57 % of the population—live in poverty, with rural areas experiencing a higher poverty rate (11.34 %) compared to urban areas (6.66 %). While low education, low income, and unemployment may not have a direct impact, they can exacerbate TB prevalence.[5]

Recently, the government issued Presidential Regulation No. 67/2021 on Tuberculosis, which introduces a business process involving multiple stakeholders. However, little attention has been given to reviewing the adequacy of the regulation, particularly its provisions regarding the role of village governments as key stakeholders.

Villages, as the lowest administrative unit in Indonesia, hold strategic importance due to their proximity to communities. Ensuring that the role of village governments is clearly defined is crucial for driving TB

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elimination efforts. This paper aims to analyze the strengths and weaknesses of the existing regulation, particularly its emphasis on the village government's role, to serve as a basis for future improvements in TB governance.

It is widely acknowledged that managing infectious diseases requires not only public awareness to minimize risks but also prompt and well-designed policy responses, particularly at the community level. Diseases like polio, with effective governance and treatment, have been successfully managed[6]; p. 2). However, certain diseases have re-emerged in recent times, including during the COVID-19 pandemic, albeit with lower intensity[7]; p. 4; Merdeka.com, November 17, 2020).

In 2020, Indonesia reported 357,199 notified TB cases out of an estimated 845,000 cases (Indonesian TB Report, 2020). According to the Ministry of Health (2021), 24,000 of these cases involved drug-resistant TB, and 98,000 TB-related deaths occurred—equivalent to 11 deaths per hour. This means that only 42 % of TB patients received adequate intervention, leaving a significant gap in treatment and care. These challenges are compounded by high population density, making TB detection and tracing more difficult[8]; pp. 86–87;[9]; p. 91.[10–12].

Interestingly, the number of notified TB cases in 2021 increased slightly to 385,295, representing a 2.04 % rise. However, this cannot be seen as progress, as obstacles in tracing and testing persist. The COVID-19 pandemic further complicated these efforts, diverting healthcare workers and resources toward pandemic management.[13] This diversion led to reduced allocations for managing other diseases, including TB, resulting in fewer cases being reported and notified.

It is estimated that during the pandemic, less than 50 % of TB cases were notified, with drug-resistant TB cases dropping to just 860. As health systems recover post-COVID-19, the number of TB notifications is expected to rise sharply, alongside other communicable and non-communicable diseases such as HIV, diabetes, and hypertension[14]; p. 6;[15]; p. 12; [28], pp. 11–13).

Effective TB control requires strong policy responses at all levels of government. Evidence from Europe and Africa shows that optimal treatment and governance can significantly reduce TB notification rates[16]; pp. 10–11;[17]; pp. 1159–1160). The role of village governments is critical in this regard, given their proximity to communities and their potential to incorporate TB-responsive measures into local development plans.

This paper examines the advantages and limitations of Presidential Regulation No. 67/2021 in enhancing the role of village governments in TB governance. Using regulatory analysis as the primary approach, the study identifies strengths and gaps in the regulation's coverage, discretion, and organizational framework. Strengthening village governments' roles through improved regulatory support is vital for achieving TB elimination in Indonesia.

2. Research methods

The primary focus of this paper is **analysing** Presidential Regulation No. 67/2021 to evaluate its strengths and weaknesses in accommodating the role of village governments in TB control efforts. To achieve this, the research primarily relies on a desk study method for data collection, employing a content analysis approach. This enables a thorough examination of the regulation's provisions, particularly in terms of their clarity and feasibility.

To enhance the depth of the analysis, this study is complemented by data gathered through interviews and focus group discussions (FGDs). These additional methods provide practical insights and perspectives on the implementation of the regulation, facilitating a more comprehensive assessment of its strengths and limitations in real-world contexts. There are **19 informants,** consisting of **11 village government representatives** and **6 Community Health Centre officials,** both categorized as having good TB governance based on reports and media reviews. Additionally, the study includes **1 TB project officer** and **1 civil society organization representative.**

Furthermore, **10 FGDs** were conducted, categorized as follows: **1 FGD** with ministries (including the Ministry of Finance, the Ministry of Village, Development of Disadvantaged Regions, and Transmigration, the Ministry of Health, the Presidential Staff Office, and the Ministry of Home Affairs); **2 FGDs** with villages categorized as having a high number of TB cases but good TB governance; **2 FGDs** with villages categorized as having a high number of TB cases but less effective TB governance; **2 FGDs** with TB patients and patient associations; **2 FGDs** with district governments, consisting of district development agencies and district offices for village community empowerment; and **1 FGD** with civil society organizations. Besides being selected based on document reviews, FGD participants were also contacted using **snowball sampling techniques.**

All interviews and FGDs aimed to address questions on existing TB challenges, the adequacy of regulatory support at national and sub-national levels, the current village-level implementation of TB elimination programs, and additional requirements for village governance to enhance the effectiveness of TB programs within their authority.

Data gathered from regulatory reviews **were analysed** to identify opportunities and constraints in village governance for implementing the TB elimination program. These findings were then validated through interviews and FGDs at the village community level.

3. Results and discussions

3.1. Presidential Regulation No. 67/2021 and the TB control business process

The government has established the **National Strategic Plan 2020–2024** and the **Interim National Strategic Plan 2025–2026** through the Ministry of Health. However, challenges persist due to inadequate coordination, even though effective TB management requires the involvement of various parties, sectors, and ministries[18]; p. 400).

To address this problem, the government issued **Presidential Regulation No. 67 of 2021 on TB Control**, aimed at encouraging the involvement of all stakeholders—both governmental and non-governmental—at national and local levels[19]; p. 7;[27], p. 145), including village governments. The government recognizes that TB control necessitates a comprehensive approach with intensive community participation[20]; p. 1). Village governments, being the closest government entities to the community, are highlighted in the regulation, reflecting the importance of grassroots involvement in addressing TB.

The emphasis on the role of village governments is crucial for at least two reasons. First, the potential for undetected cases remains high, while access to **Communication, Information, and Education's** initiatives is still limited. The contributions of villages are foundational in mitigating this risk. Second, at the village level, health initiatives are often narrowly defined, focusing on ***Posyandu*** (Integrated Health Services for pregnant women, infants, and children under five), ***Posbindu*** (Integrated Health Services for the elderly with higher risks of non-communicable diseases, which remain unevenly implemented across Indonesia), and mosquito larvae inspections to combat dengue fever[21]; p. 243). As a result, diseases like TB, HIV, and malaria are often neglected[22]; p. 151).

Presidential Regulation No. 67/2021 sets ambitious targets for reducing TB prevalence. The goal is to lower the number of TB cases to **65 per 100,000 population**, a significant decrease from **319 cases per 100,000 population** recorded in 2017, before the COVID-19 pandemic. Additionally, the regulation aims to reduce the TB mortality rate to **6 deaths per 100,000 population**, down from **42 deaths per 100,000 population** in 2017.

Village involvement is pivotal for empowering communities through direct engagement within the scope and authority of village governments[23]; p. 46.[24]; However, based on interviews, the **lack of clear derivative regulations** has caused some village governments to hesitate in

taking proactive measures to control TB, despite recognizing the program's importance. In reality, TB remains prevalent in rural areas, underscoring the critical need for village-level intervention.

Clearer regulations not only **strengthen** villages' confidence in allocating support for TB programs—covering mitigation (including communication, information, and education; promotion of clean and healthy behaviors; improved sanitation; and adequate housing), identification (such as case tracing and testing), and treatment (such as medication adherence and socio-economic support for TB patients' families)—but also encourage those that have yet to recognize the urgency of addressing TB cases.

The Presidential Regulation is designed to facilitate collaboration and coordination across ministries, stakeholders, and sectors. It delineates the responsibilities of various parties in TB control efforts. The Central Government is responsible for formulating policies related to TB control, implementing integrated TB control activities, providing necessary resources for TB control, addressing the psychosocial and economic impacts faced by TB patients and their families, and implementing social protection and empowerment measures for TB patients and affected communities.

Local Governments (provinces and districts/cities) are responsible for integrating TB indicators into regional medium-term development plans and strategic plans as health priorities, coordinating the implementation of TB control activities within their jurisdictions, allocating funding for TB control from various sources, strengthening human resources to meet TB control targets, actively and promptly detecting TB cases through community involvement, ensuring that all diagnosed TB cases are recorded and reported in the TB information system, providing TB preventive treatment to vulnerable populations, addressing the psychosocial and economic challenges faced by TB patients and their families, and developing and implementing policies to encourage TB patients to complete their treatment.

3.2. Main roles of Village governments according to Presidential Regulation No. 67/2021

The role of villages is critical in supporting district governments in conducting their tasks, particularly those involving communities, such as case detection, governing preventive treatments, providing support to patients and their families, and ensuring the completion of treatment regimens.

Village governments play a pivotal role under Presidential Regulation No. 67 of 2021, with a strong emphasis on community involvement, as outlined in the regulation. The importance of villages is primarily linked to their function in organizing TB control activities that support efforts by the Central and Regional Governments, especially in promotive, preventive, and rehabilitative measures. Their roles include organizing TB control activities to complement efforts by the Central and Regional Governments, providing support for TB patients, particularly in addressing complementary needs, preventing stigma and discrimination against TB patients within the community, contributing input for policy formulation related to TB control, and participating in joint mitigation efforts with the Central and Regional Governments to address the psychosocial and economic impacts faced by drug-resistant TB patients and their families.

Despite their autonomy, village governments operate under the guidance of the Ministry of Villages. Therefore, the role of the Ministry of Villages is equally crucial for enhancing the effectiveness of village governance in TB elimination efforts. Regulations by the Ministry of Villages help village governments gain confidence in realizing their potential to accelerate testing, tracing, and treatment through community-driven participatory approaches while implementing promotive, preventive, curative, and rehabilitative initiatives within their authority. The Presidential Regulation also mandates the Ministry of Villages to ensure a Village Fund Utilization policy for accelerating TB elimination. As the regulation highlights, the targeted Ministry of Villages' policy for Village Fund Utilization guidelines was expected to be established in 2022. In addition, according to Article 2 of the Presidential Regulation, village governments are required to actively participate in TB control efforts and work collaboratively alongside other stakeholders.

Two critical areas of policy for village governments outlined in the Presidential Regulation include the following. The first is establishing TB-Ready Villages (*Desa Siaga TB*). This initiative is part of the National Strategy for TB Control, aimed at creating villages with optimal TB control functions based on local contexts and cultural values. TB-Ready Villages are designed to promote bottom-up approaches to achieving TB-free districts/cities by 2030. The target is for 100 % of villages in Indonesia to establish and operationalize TB-Ready Villages by 2024, under the coordination of the Ministry of Health, with support from other government agencies.

The concept of TB-Ready Villages is an extension of the "Standby Village" (*Desa Siaga*) program introduced in 2006, which focuses on equipping villages with the resources and systems necessary to address health issues, disasters, and emergencies independently. Key features include health posts, community-based emergency systems, independent health financing, and residents practicing clean and healthy behaviours.

The second is strengthening village-level planning, budgeting, and implementation for TB control. This involves ensuring that village funds are allocated effectively to support TB elimination initiatives. The Presidential Regulation aims to utilize village funds for TB control and elimination by 2024, alongside programs for developing village health cadres.

In dealing with this, the National Strategy for TB Control (2020–2024) highlights specific uses for village funds, such as promoting clean and healthy living behaviours, balanced nutrition, and disease prevention, as well as supporting the procurement, development, and maintenance of health facilities at the village level, such as medical centres, integrated healthcare centres, and village health posts.

The Presidential Regulation, as such, positions villages as an integral part of TB control efforts, alongside other stakeholders. Achieving the ambitious targets outlined requires consistent implementation and additional support to ensure that village governments can fulfil their roles effectively. By focusing on community-driven approaches and leveraging village funds, villages can contribute significantly to the nationwide goal of TB elimination by 2030.

3.3. Adequacy of emphasis on the role of villages in the Presidential Regulation

The Presidential Regulation highlights the government's recognition that tuberculosis (TB) control requires active community participation. Consequently, the regulation emphasizes the role of villages—being the closest entities to the community—by leveraging the concept of a "standby village." Additionally, it underscores the integration of village involvement with the village fund policy. Together with provincial and regency/city governments, villages are expected to incorporate TB control measures into their development planning, budgeting, implementation, and monitoring processes.

Village governments can support TB control efforts, which primarily fall under the authority of provincial and district governments, by fostering a clean and healthy environment and conducting health campaigns to raise public awareness. These initiatives can complement the efforts already in place.

The importance of this Presidential Regulation is further reinforced by existing village governance laws. Law No. June 2014 on Villages, alongside its amendments in Government Regulation No. 47/2015 and Government Regulation No. 8/2016, emphasizes the village's critical role in improving community health and welfare. Furthermore, the Minister of Home Affairs Regulation No. 44/2016 on Village Authority and the Minister of Home Affairs Regulation No. 20/2018 on Village

Financial Management direct villages to optimize their functions in community development.

However, despite these regulatory frameworks, the implementation of TB control measures at the village level remains politically challenging. This is primarily because village funds, a significant part of village income, are governed by the Ministry of Villages and the Ministry of Finance. Without specific regulatory guidance from these ministries, village governments face significant barriers in allocating resources for TB control. To ensure optimal functioning, regulatory support from both the Ministry of Villages and the Ministry of Finance is essential.

To follow through on the mandate of the Presidential Regulation, concrete steps are needed to clearly define the role of villages in TB control, aligned with their authority, capacity, and responsibilities. This is crucial to avoid overlaps with district and provincial government functions in eliminating TB. Villages can still contribute within their scope of authority by supporting health centres (*Puskesmas*) and district health offices in testing, tracing, treatment, and preventive, curative, and rehabilitative efforts.

Several villages have already taken proactive roles, such as tracing potential TB cases, providing transportation to health facilities, and offering nutritional support to affected residents. However, for broader and more confident implementation, the Presidential Regulation requires derivative regulations at the ministry, provincial, and district levels. These regulations would give village governments the assurance needed to allocate resources toward achieving the national target of eradicating TB.

Villages can further strengthen TB control efforts through activities funded by the Village Revenue and Expenditure Budget (*APBDes*), including proper allocations from the Village Fund,[25] over a phased timeline until 2030. Yet, as emphasized earlier, financial regulations from the Ministry of Finance and guidance from the Ministry of Villages remain vital to ensuring seamless implementation. Clear derivative regulations would enable villages to take concrete actions, particularly in areas with identified TB cases.

Moreover, villages still require assistance from Regional Apparatus Organizations (OPD) at the district level, as well as professional and technical advisors, to enhance their capacity for addressing TB. This includes engaging communities in sustainable TB prevention activities and managing the associated programs effectively.

3.4. Further expected implications and potential barriers

As explained earlier, clearer directions for **village governments** through derivative regulations will boost their confidence in allocating support for mitigation, case identification, and treatment within their scope of **work** and authorities, as well as push those who **have yet to recognize** the importance of the program to accommodate TB-related necessities in **the village's** development planning.

In some cases, based on interviews, village governments are aware that TB is part of their problem, but often, the absence of derivative regulations has made it difficult **for them to handle** the influencing issues, like socio-cultural barriers, logistical constraints, and political obstacles. A village official in Sumatra emphasized that a prevailing belief in the community—that a persistent cough is linked to mystical causes—has been a significant challenge for the TB elimination program. However, with limited flexibility for village governments to allocate resources for educational initiatives, there has been little they can do to address this issue effectively.

A Community Health Center officer in West Java acknowledged that village-level health cadres receive no financial support from either their office or the village government to conduct case investigations. Yet, these cadres must travel from household to household to trace the spread of TB, persuade suspected cases to provide sputum samples, and assist them in getting tested at health centres in **sub-districts** or even district areas.

Similarly, a village official in Central Java noted that, at times, they had to use their own resources to help suspected TB patients reach health centres for testing and diagnosis. These logistical challenges remain unresolved due to the absence of derivative regulations that would provide a legal basis for village governments to allocate funding for TB-related programs. Meanwhile, all village governments receive Village Funds from the national government—meaning the resources are available, but the regulatory framework to utilize them effectively is lacking.

In villages where TB elimination programs have been implemented—typically as pilot projects supported by donors—case detection and management have proven effective, despite variations in coordination and networking strategies. Interviews revealed that when support is available, health cadres have greater flexibility to communicate with health centres and village governments, as well as to assist families with TB **suspects** and patients in accessing sputum tests, diagnosis, and medication.

For example, in 2020, a sub-district in Central Java, supported by a national Muslim women's organization, identified at least 300 TB cases. A sub-district in West Java, backed by a national NGO, detected 98 cases, while another sub-district in East Java identified 59 cases. All of these successes were made possible through the efforts of village-level health cadres. Since resources are available at the village level, providing clear guidance through derivative regulations and guidelines is essential.

Political obstacles may arise from village officials who prioritize infrastructure development over empowerment programs like TB care and control, as infrastructure projects are easier to implement and report financially. Additionally, visible infrastructure improvements provide greater political leverage for garnering public support for village leaders.

Resistance may also come from village governments that argue health matters fall under the responsibility of Community Health Centres rather than their jurisdiction. In this context, stronger intervention from district governments is essential—not only in setting policy directions but also in guiding village-level planning, implementation, and monitoring to ensure TB programs receive adequate attention and resources.

4. Conclusion

Based on the above explanation, the regulation outlined in Presidential Regulation 67/2021 represents a significant breakthrough. The regulation underscores a comprehensive, multi-stakeholder, and multi-sectoral approach, which, as noted by[26]; p. 56), is essential for catalysing reform in public policy. Additionally, the Presidential Regulation highlights the village's pivotal role in TB control efforts.

However, the successful implementation of this regulation requires explicit confirmation and support from the relevant ministries, particularly the Ministry of Villages, the Ministry of Finance, and the Ministry of Health. Such clarity is essential to ensure that the multi-sectoral and multi-stakeholder approach emphasized in the regulation **enables** village governments to fulfill their roles effectively in TB control initiatives.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Laila Kholid Alfirdaus reports administrative support was provided by Diponegoro University. Laila Kholid Alfirdaus reports financial support was provided by Stop TB Partnership Indonesia (STPI). Retna Hanani reports was provided by Stop TB Partnership Indonesia (STPI). Retna Hanani reports administrative support was provided by Diponegoro University. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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