

## Optimizing Health Research Budget Allocation through Reformulation of State Budget Funding Regulations

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### Keywords

Health Research Funding; Law Reform; Budget Transparency

### ABSTRACT

Health research is crucial for enhancing medical services and improving community welfare in Indonesia. However, challenges such as uneven allocation, limited transparency, and insufficient integration of research findings into health policy continue to hinder the effectiveness of research funding. This study aims to evaluate the policies and decision-making processes involved in the procurement of health research budgets in Indonesia and propose legal formulations to ensure that these funds are managed in a fair, transparent, and accountable manner. The study utilizes an empirical juridical research method with legislative, conceptual, and comparative approaches. Data were gathered through interviews, observations, and literature studies, followed by descriptive-analytical analysis using case studies and legal theories on utility, legislation, and legal reform. The findings reveal that the allocation of health research budgets has not fully adhered to principles of equity, and research outcomes are often not incorporated into policy. Budget allocations are still influenced by political interests, and cross-agency coordination remains weak. Legal reforms are necessary to make the budget management process more participatory, measurable, and evidence-based. Transparent and adaptive legal reforms are crucial to optimizing state budget use in health research. Additionally, establishing a digitized surveillance system, multi-stakeholder forums, and enhancing the capacity of research and bureaucratic sectors are essential to fostering an inclusive and sustainable medical innovation ecosystem.

### INTRODUCTION

Health is a basic human right that is guaranteed in various legal instruments, both national and international. In the Indonesian context, the right to health is explicitly stated in the 1945 Constitution article 28H paragraph (1), which states that everyone has the right to live a prosperous life in birth and mind, to live, and to receive health services. Therefore, the state has an obligation to ensure the fulfillment of these rights through various policies, including the funding of appropriate and sustainable health research (Isriawaty, 2015).

Health research has an important role as a foundation for innovation, evidence-based policy, and improvement of medical services. Developed countries such as the United States, Japan, and Germany have proven that investment in health research is directly proportional to the progress of the healthcare system and global competitiveness in the medical technology sector (Doe, 2019b). On the other hand, developing countries with minimal investment in this sector tend to experience stagnation of innovation, low service quality, and dependence on

foreign products (Kartika, 2021).

Indonesia itself still faces major challenges in managing health research funding. One of the main problems is the unbalanced budget allocation and lack of orientation to real needs in the field. Research conducted is often not in accordance with national priorities or is not followed up into public policy because there is no integration mechanism between research institutions and policy makers (Saputro & et al., 2023).

This is exacerbated by weak transparency and accountability in the budget procurement and distribution system. The planning and execution process is often done top-down, without broad participation from stakeholders such as academia, independent research institutions, or civil society (Wahyudi, 2019). As a result, the distribution of funds is often politically biased, centralized in a particular region, and does not reflect the principles of substantive justice (D. Prasetyo, 2020).

In the Indonesian legal system, the basis for regulating research and its budget is spread across several laws and regulations, but there is no legal framework that comprehensively regulates the governance of research funding based on transparency and accountability. Law Number 17 of 2023 concerning Health, for example, does affirm the importance of research to support health services, but does not provide technical direction regarding budget governance in detail (U.-U. R. Indonesia, 2023). This is a challenge when institutions such as BRIN and the Ministry of Health have to develop technical policies for the management of research budgets, without a strong legal and operational basis.

This condition is becoming increasingly urgent to be reviewed within the framework of legal theory. The theory of the usefulness of law introduced by Hans Kelsen puts forward the idea that law must function to create social welfare (Kelsen, 1960). In the context of research funding, the law should be able to ensure that the state budget is used optimally for research that has a direct impact on improving the quality of public health. If the law is not able to guarantee the fairness of the allocation, then its social function becomes weak.

On the other hand, the theory of legislation developed by thinkers such as Seidman, Nawiasky, and Hans Kelsen emphasized that the law-making process, including budget regulation, should reflect important principles such as legal certainty, public participation, and effectiveness (Seidman, 1998). This means that health research budget policies must be born from a mechanism of legislation that is open, accountable, and responsive to the needs of the wider community.

The approach to law *reform* is also an important foundation in this study. Legal reform is not only about changing the legal text, but also about changes in the institutional structure, governance procedures, and legal culture that prevail in the bureaucratic environment (T. Prasetyo, 2017). In this case, the reform of the law related to health research funding aims to develop a regulatory framework that is able to respond to global challenges, encourage efficiency, and ensure the responsible use of the State Budget.

By referring to GoodStats and Katadata data, it is known that Indonesia has only allocated around IDR 1.77 trillion for more than 2,000 research projects until 2023. Of these, the proportion of health research is very small, and the majority of research has not yet entered the policy implementation stage (Center, 2023). This shows that there is a significant research-to-policy gap, which hinders the realization of research-based innovation in the health sector.

Based on the above issues, this paper will analyse the policies and processes of health

research budget procurement in Indonesia, as well as evaluate the regulations and legal practices that have been implemented.

The objectives of this study are to analyze the current policies and practices related to health research funding in Indonesia, identify the gaps in the existing legal and institutional frameworks that hinder the effective allocation and use of research funds, and propose legal reforms that ensure the transparent, participatory, and needs-based allocation of research budgets. Additionally, this research aims to develop a framework for integrating research outcomes into public health policies, enhancing their impact on national health improvement.

The benefits of this research are significant in both the legal and policy arenas. It contributes to the ongoing discourse by addressing a crucial gap in the governance of health research funding. Furthermore, it provides evidence-based recommendations for policymakers and stakeholders to improve the fairness, transparency, and effectiveness of health research budgets. This study also offers practical solutions for ensuring that research investments lead to tangible improvements in public health by integrating research findings into health policy. Finally, it proposes innovative strategies for engaging multiple stakeholders in the decision-making process, fostering a more inclusive and responsive health research ecosystem.

## **METHOD**

This study uses an empirical juridical approach combined with normative analysis methods and case studies. This approach allows for an in-depth analysis of the legal aspects affecting the transparency, accountability, and fairness in the health research budget allocation process in Indonesia. Data for this study were collected through three main techniques. First, interviews were conducted with key stakeholders, including policymakers, representatives from research agencies such as BRIN (National Research and Innovation Agency), and health policy experts. These interviews provided insights into the challenges and inefficiencies in the research fund allocation procedures. Second, observations were made to collect data directly from budget planning sessions and decision-making processes at the Ministry of Health, enabling the researcher to analyze the political influence in budget discussions. Third, a literature review was conducted to examine relevant academic articles, government reports, and policy documents related to health research funding, providing a broader context and identifying gaps in the existing legal and procedural frameworks.

Data analysis was carried out using descriptive-analytical techniques. The data collected from interviews and observations were analyzed qualitatively with content analysis, where interview transcripts and field notes were coded to identify recurring themes, such as budget allocation inequities, transparency issues, and the integration of research findings into policy. Additionally, a case study approach was used to analyze specific cases of health research budget allocation, allowing for a comparison between different institutions regarding fund distribution disparities and the role of political influence. The legal theory of utility and legislation theory were also applied to assess how well the existing regulations support the principles of justice, transparency, and public participation in budget decisions. This research aims to make both conceptual and practical contributions to the formulation of laws that are more adaptive, transparent, and accountable, fostering a more inclusive and sustainable national health development model.

## RESULTS AND DISCUSSION

### **Policies and Decision-Making Processes in the Ministry of Health Related to the Procurement of Health Research Budgets in Indonesia Reviewed from the Principle of Justice in Its Use So Far**

The process of allocating the budget for health research in Indonesia still does not fully reflect the principles of social justice which are the main foundation in the legal system and state governance. One of the fundamental problems is the inequality of budget distribution that is more centralized in urban areas or institutions that have strong relations with the centre of power. Meanwhile, institutions in regions with urgent needs for medical research and innovation often do not receive adequate budget allocation priorities [12]. This shows that there is a structural disparity that hinders the equitable distribution of research results at the national level.

This injustice is exacerbated by decision-making mechanisms that are still top-down and closed. In practice, research budget procurement policies rarely involve regional researchers, professional organizations, or non-governmental organizations in the formulation process. In fact, the principle of public participation has become an integral part of modern legislation theory that emphasizes the importance of stakeholder involvement in public policy formulation (Huda & Nazriyah, 2019). The absence of an open consultation space closes the opportunity to understand specific and contextual local needs in the health sector.

From a juridical point of view, this condition raises questions about the extent to which the applicable legal system is able to guarantee the principle of justice in budget policy. According to Hans Kelsen, justice in law must be interpreted as the ability of legal norms to distribute benefits equally to society (Center, 2023). When budget policy is unable to fulfil this principle, the law fails to carry out its role as an instrument of social engineering. In other words, the practice of geographically biased budget allocation is a form of systemic failure in the implementation of the principle of substantive justice.

An evaluation of the internal mechanism of the Ministry of Health shows that the procedure for evaluating research proposals is still greatly influenced by bureaucratic and political factors. Some studies reveal that the success of an institution in obtaining research funding is often determined more by institutional connections and reputation than by the quality and urgency of the research theme itself (Smith, 2020). As a result, projects that have the potential for a wide impact on the community are left behind because they do not have adequate political or administrative access to obtain funds.

Even more ironic, in some cases, areas with a high burden of disease and poor health infrastructure actually get a very small portion of the research budget. For example, provinces in eastern Indonesia often receive only a small fraction of the total national research budget despite having complex chronic health issues, such as stunting, malaria, and shortages of medical personnel (Sari, 2020a). This kind of inequality not only impacts the lack of data-driven solutions in the region, but also reinforces long-standing socio-economic inequalities.

The theory of legal usefulness has again become important to analyse this situation. In this approach, the law is understood not only as a rule that must be obeyed, but also as a tool to achieve the welfare of the community (Center, 2023). Therefore, the allocation of health research funds should be designed with the principle of prioritizing maximum needs and benefits for the community, not solely technocratic or bureaucratic considerations.

International studies show that countries with local needs-based research funding systems tend to produce more relevant and effective health policies. For example, in Canada and Finland, health research decision-making is conducted through a cross-regional forum mechanism involving civil society and academic institutions at the local level [16]. Such a system can be a reference for Indonesia in formulating a more equitable and inclusive research budget distribution system.

Justice in the procurement of research budgets cannot be separated from the principles of transparency and accountability. Without adequate public information about the selection process, evaluation criteria, and budget reporting, it will be difficult to assess whether the allocation has met the principles of fairness. Unfortunately, until now there are still many reports that mention low data disclosure related to the distribution of research funds, both at the central and regional levels (Cohen et al., 1972). This makes it difficult for the public to supervise the performance of health research budget management institutions.

To address these inequalities, reforms are needed in a more participatory and evidence-based decision-making system. The government needs to establish a consultative forum involving various stakeholders in the health sector, including academics, researchers, and civil society organizations. This mechanism should be integrated into the annual budget evaluation and planning process, so that the decisions taken truly reflect the needs of the wider community (T. Prasetyo, 2017).

In the end, the principle of justice in funding health research is not only a moral and ethical issue, but also a legal basis that should be upheld by the state. Without fairness in budget distribution, research goals to improve the quality of health services will be difficult to achieve evenly. Therefore, the policy of procurement of research budgets must be reformulated in a clear, accountable, and supportive legal framework for the people most in need.

### **Policy and Decision-Making Process in Budget Procurement Taking into account and integrating research results to support more effective health policy improvements**

The integration of research results in health policy is an important pillar in building an evidence-based health system. However, in practice, decision-making related to the procurement of research budgets in Indonesia has not fully considered the output of the research that has been carried out. This creates a gap between science and policy practice (*research-to-policy gap*) which has an impact on the low effectiveness of public health interventions (Otto et al., 2010).

One of the main causes of this gap is the lack of coordination between research institutions such as BRIN, universities, and policy makers such as the Ministry of Health. Many research results end up as just academic reports that are never used in the decision-making process. This problem is exacerbated by irregularities in research data utilization mechanisms, including the lack of a digitization system that allows for real-time cross-sector data integration (Doe, 2019a).

In Kingdon's agenda setting theory, an issue can be included in the policy agenda if there is a meeting between the problem, the solution, and the supporting political conditions. However, in Indonesia, research results are often unable to penetrate the policy agenda due to weak advocacy and lack of representation of researchers in the formulation process (Dewi,

2020). This shows the importance of building co-laboratory networks between research actors and policymakers.

Case studies such as the free health screening program launched by the government in 2023 show that epidemiological research can be used as a strong policy basis. This program is driven by research findings regarding the high prevalence of non-communicable diseases such as stroke and heart. However, the success of the program has not been widely replicated due to irregularities in data collection and use in the regions (Sari, 2020b).

Evidence-based policy models require adaptive decision-making cycles. Every program funded through the State Budget should go through a process that includes evaluation of previous research, formulation of new policies, implementation, and re-evaluation of policy results. Unfortunately, this cycle is still rarely applied comprehensively in health research policy in Indonesia (BRIN, 2022). Without a strong evaluative cycle, research results are difficult to form the basis for dynamic and responsive policies to change.

The bureaucratic aspect is also the main obstacle. Many research results that contain criticism of current policies are ignored because they are considered to disrupt stability or are not in line with political priorities. In fact, in practice in developed countries, research-based criticism is considered a constructive input for policy improvement (Undang-Undang, 2009). Therefore, it is important to strengthen academic freedom and guarantee that research results can be discussed openly in policy forums.

The lack of an incentive system for the use of research in policy is also a challenge. Neither researchers nor policymakers have a reward mechanism for successfully integrating scientific findings into public policy documents. As a result, motivation to use research data is low and more dominated by technocratic or political considerations (Undang-Undang, 2019).

Solutions that can be offered include the establishment of a policy lab or knowledge translation centre under government coordination, which is tasked with bridging the world of research and the world of policy. This institution can be a consultative space where research is extracted in a simple and strategic way so that it can be used in the planning and budgeting process (Undang-Undang, 2019). Several universities in Europe have implemented similar approaches with positive results in accelerating the adoption of policy innovations.

The use of digital technology is also a must. An online research data management system, with integration between BRIN, the Ministry of Health, BPJS, and local governments, will be very helpful in data synchronization. Data stored in the national system will facilitate the process of searching, decision-making, and monitoring evidence-based policies ((Bappenas), 2022).

Thus, the integration of research results in decision-making cannot be done sporadically and informally. Systemic changes are needed starting from the way research is designed, disseminated, and used as a basis for decision-making. Only with a structured, participatory, and evidence-based approach, research budgets can be a strategic tool to encourage the transformation of Indonesia's health system towards a more inclusive and adaptive direction.

## **Policies and Decision-Making Processes in the Ministry of Health Related to the Procurement of Health Research Budgets in Indonesia Reviewed from the Principle of Justice in Its Use So Far**

Clear and consistent legal formulation is essential in supporting the effectiveness of budget allocation for health research. This legal umbrella provides legitimacy for the use of public funds as well as the basis for accountability in its implementation (RI, 2022b). Laws related to health and research, such as the National Health System Law and the Law on Research and Innovation, contain provisions that regulate the planning and financing of health research from the State Budget. The strengthening of this regulation aims to ensure that research activities have legal certainty and are able to respond to national medical challenges (BRIN, 2023).

On the other hand, the state budget for health research is still relatively small when compared to its needs and potential benefits. Therefore, strategic policies are needed to increase the portion of the research budget, as well as allocate it efficiently in accordance with national priorities [30]. The effectiveness of budget allocation can be achieved through performance-based planning mechanisms and evidence-based *budgeting*. In this case, evaluation of the results of previous research is important to determine the focus and financing of the next research (RI, 2022a).

Coordination between ministries and institutions is also a key factor in budget management. For example, cooperation between the Ministry of Health, BRIN, and the Ministry of Finance must be strengthened so that there is no overlap of programs and to ensure alignment between policies, funding, and research implementation (W. H. O. Indonesia, 2021).

In addition, transparency and accountability are needed in the use of the budget. This can be done with an open budget reporting system and involving independent parties in the monitoring and evaluation process (Wibisono, 2022). Fiscal incentives such as tax cuts or matching funds can also be a strategy to encourage private participation in supporting health research funding, so that the burden on the state budget is not too large .

The government also needs to establish key performance indicators (KPIs) in health research funded by the State Budget, such as the number of patents, international publications, or the impact of research on health policy. This will increase effectiveness as well as strengthen budget accountability (BRIN, 2023). With good budget management, research in the health field can develop significantly and generate medical innovations that benefit society. It also supports the nation's independence in health technology (W. H. O. Indonesia, 2021).

Ultimately, effective budget management for health research is not just a matter of fiscal efficiency, but a long-term investment in human development and the resilience of national health systems (Wibisono, 2022).

## **CONCLUSION**

Research in the health sector has a very vital role in supporting medical progress and improving the quality of public health services. To achieve optimal results, strong synergy between legal regulations, budget allocation, and good governance is needed. Clear and comprehensive legal formulations provide a solid basis for the implementation of research,

ensure program continuity, and avoid overlapping policies between institutions. On the other hand, budget allocation from the State Budget that is managed effectively and performance-based is the main prerequisite to support the sustainability and relevance of national health research. Evidence-based *budgeting* and planning mechanisms must be the standard in determining research priorities, so that resources can be optimally used to address strategic health challenges. Cross-sector institutional involvement, transparency in the use of funds, and measurable performance indicators are key to creating a credible and impactful research ecosystem. Fiscal support, both from the government and partnerships with the private sector, will also further strengthen domestic innovation capacity in the medical sector. Overall, efforts to strengthen regulation and efficiency in the management of health research budgets not only function as administrative tools, but are a long-term investment in human development, health technology independence, and national health system resilience. With a strategic, coordinated, and evidence-based approach, Indonesia can position itself as an adaptive country and excel in global health innovation.

## REFERENCES

- (Bappenas), B. P. P. N. (2022). *Panduan Perencanaan dan Penganggaran Berbasis Kinerja*. BRIN. (2022). *Sinergi Riset dan Kebijakan: Laporan Tahunan*.  
 BRIN. (2023). *Skema Pendanaan Riset dan Inovasi*.  
 Center, K. I. (2023). *Evaluasi Pendanaan Riset Nasional*.  
 Cohen, M., March, J., & Olsen, J. P. (1972). A Garbage Can Model of Organizational Choice. *Administrative Science Quarterly*, 17, 1–25.  
 Dewi, L. R. (2020). Perspektif Positivisme Kedudukan Hukum Pemberlakuan Undang-Undang. *Jurnal Ilmiah Hukum dan Keadilan*, 7(1).  
 Doe, J. (2019a). Best Practices in Health Research Funding: A Comparative Study. *International Journal of Public Policy*, 15(2).  
 Doe, J. (2019b). Best Practices in Health Research Funding. *International Journal of Public Policy*, 15(2).  
 Huda, N., & Nazriyah, R. (2019). *Teori dan Pengujian Peraturan Perundang-Undangan*. Nusamedia.  
 Indonesia, U.-U. R. (2023). *Nomor 17 Tahun 2023 tentang Kesehatan*.  
 Indonesia, W. H. O. (2021). *Investment in Health R&D in Southeast Asia*.  
 Isriawaty, F. S. (2015). Tanggung Jawab Negara Dalam Pemenuhan Hak Atas Kesehatan Masyarakat. *Jurnal Ilmu Hukum Legal Opinion*, 3(2).  
 Kartika, R. (2021). Peluang Reformasi Kebijakan di Era Pandemi. *Jurnal Kebijakan Publik*, 8(4).  
 Kelsen, H. (1960). *Pure Theory of Law*. University of Chicago Press.  
 Otto, J. M., Stoter, S., & Arnscheidt, J. (2010). Evaluasi Ex-Ante Rancangan Legislasi. *Review of Public Policy*, 15, 34–47.  
 Prasetyo, D. (2020). Birokrasi dan Hambatan Reformasi Hukum di Indonesia. *Jurnal Administrasi Publik*, 14(1).  
 Prasetyo, T. (2017). *Pembaharuan Hukum Perspektif Teori Keadilan Bermartabat*. Setara Press.  
 RI, K. K. (2022a). *Indikator Kinerja Utama dalam Belanja Riset*.  
 RI, K. K. (2022b). *Rencana Strategis Litbangkes*.  
 Saputro, H., & et al. (2023). Hilirisasi Riset Kebijakan Kesehatan di Indonesia. *Jurnal Kebijakan Kesehatan*, 7(2).  
 Sari, L. (2020a). Transparansi dalam Pengambilan Keputusan di Sektor Kesehatan. *Jurnal*

- Administrasi Publik*, 14(2), 82.
- Sari, L. (2020b). Transparansi dalam Pengambilan Keputusan di Sektor Kesehatan. *Jurnal Administrasi Publik*, 14(2).
- Seidman, A. (1998). Proses Pembentukan Legislasi: Teori dan Praktik. *Jurnal Legislasi*.
- Smith, J. (2020). Innovative Budget Allocation Models in Healthcare Research. *Health Policy Review*, 22(3), 190–210.
- Undang-Undang. (2009). *Nomor 36 Tahun 2009 tentang Kesehatan*.
- Undang-Undang. (2019). *Nomor 11 Tahun 2019 tentang Sistem Nasional Ilmu Pengetahuan dan Teknologi*.
- Wahyudi, S. (2019). Transparansi dan Akuntabilitas dalam Pengadaan Anggaran Penelitian Kesehatan. *Jurnal Administrasi Publik*, 12(1).
- Wibisono, Y. (2022). *Manajemen Strategis Anggaran Riset Kesehatan di Indonesia*. LP3ES.