IMPLEMENTATION ANALYSIS OF INDONESIA'S HEALTH SYSTEM STRENGTHENING POLICY: A CASE STUDY THE SOPHI PROGRAM AT THE MINISTRY OG HEALTH

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Abstract

The Strengthening of Primary Healthcare in Indonesia (SOPHI) program is a Ministry of Health initiative to strengthen primary care and accelerate Universal Health Coverage by addressing shortages of medical equipment. Currently, only 61.07% of Community Health Centers (Puskesmas) meet the standard equipment set. Field evidence indicates targeting and duplication risks: 45% of sampled Puskesmas received equipment they had not requested, while 69% of requested items were already available—signaling a misalignment between planning and actual needs. This study aims to analyze SOPHI's policy implementation in need planning and distribution of equipment at primary facilities, and to identify factors shaping the accuracy and effectiveness of planning and to formulate policy recommendations. A qualitative, post-positivist approach was employed. Primary data were collected through in-depth interviews with purposively selected key informants (Ministry of Health, KPK, provincial/district health offices, and Puskesmas in DKI Jakarta, Garut, Jambi City, and Muaro Jambi). Secondary data comes from documents and literature reviews. Analysis followed George C. Edwards III's implementation framework—communication, resources, disposition, and bureaucratic structure. Findings show constraints rooted in: (1) incomplete and inconsistent central instructions and weak last-mile communication; (2) inaccurate needs data, limited human resources, and insufficient operational budgets for field verification; (3) opportunistic local dispositions (eg, "apply for everything") and ASPAK data manipulation; and (4) fragmented authority and misaligned central–local structures that hinder coordination. Collectively, these factors result in mistargeting and procurement duplication. Recommendations include strengthening two-way, last-mile communication; enforcing ASPAK as a verified, tiered, single source of truth; investing in data stewardship capacity and verification budgets; fostering data integrity with clear incentives and sanctions; and realigning coordination channels (involving Kemendari, Irda, and Bappeda) to ensure integrated, needs-based provisioning.

Keywords: Primary Healthcare, SOPHI, Ministry of Health

INTRODUCTION

One of President Joko Widodo's visions for the 2019-2024 term is to realize "an Advanced Indonesia that is Sovereign, Independent, and Has a Character Based on Mutual Cooperation." This vision is translated into eight missions, one of which is improving the quality of Indonesia's Human Resources (HR). To achieve quality HR, it is necessary to improve the quality of education and public health. One policy that can be used to improve the quality of public health, according to Ward (2017), This is achieved by providing equitable access to health services for everyone, especially in underserved areas, one way of doing this is by expanding the reach of primary health care services. A strong policy framework in primary or basic health care can help achieve Universal Health Coverage (UHC). Based on the research, Ward (2017), stated that improved public access to primary health facilities can reduce the burden on secondary/referral health services, thereby preventing the development of disease at the community level. In Indonesia, as stated Erinaputri et al., (2023), that the backbone of primary health care is implemented by Community Health Centers (Puskesmas). Therefore, Puskesmas have a strategic role in achieving Universal Health Coverage (UHC) by providing health services that cover all aspects of basic health in the community., such as curative, promotive, preventive, and rehabilitative services. Community health centers are also expected to reduce the burden of referrals to hospitals by providing quality and equitable basic health services, prioritizing promotive and preventive functions, thereby making the healthcare sector's financing burden more efficient. Unfortunately based

on reports fromWorld Health Organization (2023)The development of the Universal Health Coverage (UHC) Index in Indonesia remains very slow. In 2000, Indonesia's UHC Index was 29 points (on a scale of 10-100). Most recently, in 2021, it rose to 55 points. This means that over 21 years, the UHC Index in Indonesia has only increased by around 26 points, or an average of only 1.24 points per year. Therefore, it will take 20 years to reach the WHO's UHC Index target of at least 80 points. As an illustration, this index captures important service coverage indicators at primary health care centers, namely services in the field of reproductive, maternal, and child health (KIA); control of infectious diseases; control of non-communicable diseases; and service capacity and access. Of these four service coverage areas, in Indonesia only KIA falls into the "very high service coverage" category, while the other three regions fall into the "moderate service coverage" category. In an effort to improve the quality of public health through equal distribution of primary health services, the Minister of Health has issuedMinisterial Regulation No. 21 of 2020 concerning the Ministry of Health's Strategic Plan for 2020-2024This regulation encompasses five strategic objectives, which are then broken down into eight strategic targets to improve the quality of public health in Indonesia. One of these strategic targets is increasing the availability and quality of primary health care facilities.

One of the success indicators of strategic target number 2 (two) above is expanding the scope of primary services with the output of 1 (one) sub-district having at least 1 (one) Community Health Center that meets service standards.Referring to data released byCentral Bureau of Statisticson its websiteAs of February 2024, Indonesia had 7,288 sub-districts. Meanwhile, according to data from the Health Human Resources Information System (SISDMK) issued by the Ministry of Health,Ministry of Health in 2024The number of Community Health Centers in Indonesia is10,429 Community Health Centers (Puskesmas). Therefore, the physical/building target of at least one Puskesmas per sub-district has been met. The challenge to improving the quality of primary care at Puskesmas is not only about the existence of buildings, but also related to the availability of health human resources, health infrastructure, standard medical equipment, and the availability of medicines. Regarding the issue of completeness of medical equipment, actuallyMinister of Health, on June 3, 2024has issued Minister of Health Decree No. HK.01.07/MENKES/1047/2024 concerning Equipment Standards for Strengthening Primary Health Services at Community Health Centers, Village/Sub-district Health Service Units, and Integrated Service Posts. However, according toHealth Research and Development AgencyThe Ministry of Health, in its 2019 Health Facilities Research Report (Rifaskes), stated that on average, only 61.07% of community health centers (Puskesmas) had equipment that met standards. Approximately 38.93% of Puskesmas still lacked adequate equipment.

However, the success of UHC implementation depends heavily on the availability of competent human resources and adequate infrastructure at community health centers. Efforts to increase the capacity of health workers, provide adequate facilities, and renovate infrastructure are essential.(Erinaputri et al., 2023)Erinaputri also highlighted that one of the challenges in achieving UHC in Indonesia is the gap in service quality between community health centers (Puskesmas), caused by differences in human resource capacity and infrastructure. To address this, one of the strategic initiatives launched byMinistry of HealthIn 2023, the Strengthening of Primary Healthcare in Indonesia (SOPHI) Program was launched. The SOPHI Program is part of the Indonesian Health System Strengthening Program (https://ihss.kemkes.go.id/) which aims to provide support for health infrastructure at the basic service level. Specifically, SOPHI aims to provide medical equipment for primary health care facilities such as Posyandu, Pustu, and Puskesmas, with a focus on closing the gap in the availability of medical equipment throughout Indonesia. Furthermore, the Secretary of the Directorate General of Public Health (Ditjen Kesmas) of the Ministry of Health explained that SOPHI aims to increase the capacity of medical infrastructure and equipment with the program targeting 10,180 Puskesmas, 54,777 Puskesmas Pembantu, and 337,228 Posyandu.

This program includes the procurement of medical equipment, equipment maintenance, as well as the construction and renovation of facilities and infrastructure. The medical equipment assistance that will be provided includes equipment for maternal and child examinations, maternal, neonatal, obstetric and gynecological emergency equipment, immunization equipment, general and inpatient service equipment, dental and oral equipment, elderly services, and level 1 (one) laboratories. Funding for the purchase of this medical equipment comes from foreign loans totaling USD 1.59 billion (Rp 23.8 trillion). Of this, USD 711 million (44.8%) comes from the World Bank, USD 520 million (32.8%) comes from the Asian Infrastructure Investment Bank (AIIB), and USD 355 million (22.4%) comes from the Asian Development Bank (ADB).In the first phase (2024), based on the presentation by the Director General of Public Health, the Ministry of Health will prioritize the purchase of 30 types of medical devices from a total of 196 devices needed.

The Secretary of the Directorate General of Public Health of the Ministry of Health also stated that the planning stage for the SOPHI program began in May 2023, with details as explained in the chart below.
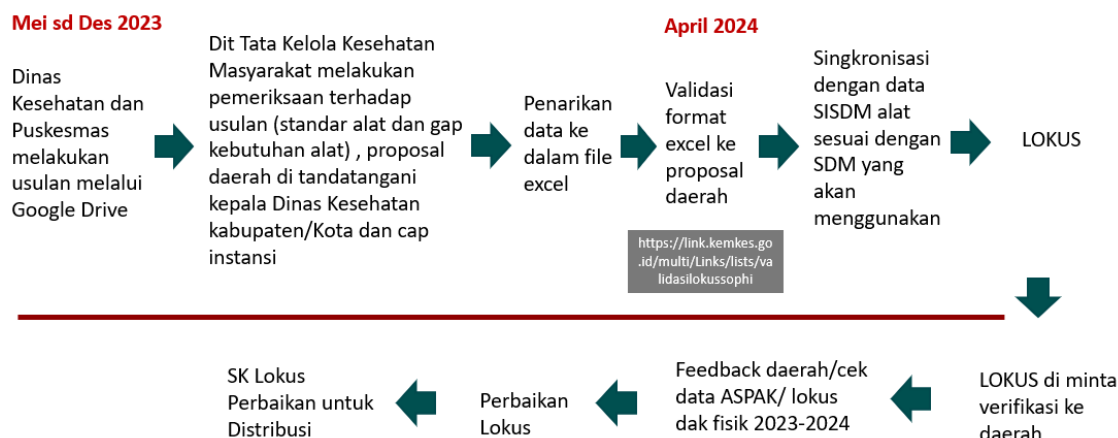

Figure 1. Medical Device Proposal Process Flow

In order to record the need for medical equipment at the Community Health Center, on June 22, 2023,Secretary of the Directorate General of Public Health Sending letter number YP.01.04/BI/2725/2023 to the Heads of Provincial/City/District Services and Heads of Community Health Centers throughout Indonesia regarding Requests for Proposals and Commitments from Regional Governments in Procuring Medical Equipment. The letter requests the recipients to submit proposals for medical equipment via Google Drive with a proposal link.https://link.kemkes.go.id/usulanalkes2023 no later than June 30, 2023. In addition to the proposed medical devices, the letter also requested a commitment to accept the devices to be distributed by the central government and provide operational and maintenance costs for the devices. Based on the submitted proposals, on September 21, 2023, the Secretary of the Directorate General of Public Health, through letter number: KS.02.03/BI/3970/2023, invited the City/Regency Offices to carry out a desk verification of the proposed medical devices for the SOPHI project by involving the Association of Health Offices (Adinkes). Due to limited manpower and funds, the desk verification carried out emphasized administrative aspects, such as the accuracy of the proposal form and the completeness of supporting documents.
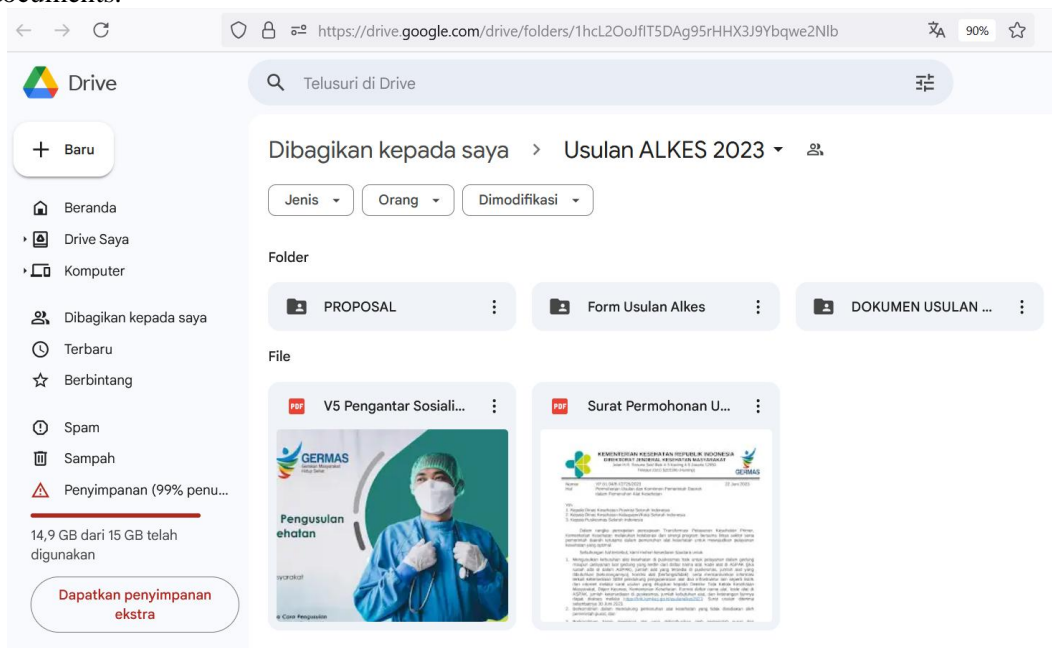

Figure 2 Screenshot of Google Drive Medical Device Proposal

To ensure that the proposal truly reflects the actual needs of the Community Health Center, the Ministry of Health requires a Statement Letter signed by the Head of the Health Office. This letter certifies that the Head of the Health Office has verified and updated the data on facilities, infrastructure, and medical equipment in the Health

Facilities and Infrastructure Application (ASPAK). From the results of the desk verification, the Directorate General of Public Health has determined the names of the Community Health Centers and the types of medical equipment that will be received as per the following link: https://lookerstudio.google.com/reporting/05d0886a-68fa-45d2-b790-23bd8ac612a1/page/p_b1n2g2axgd.
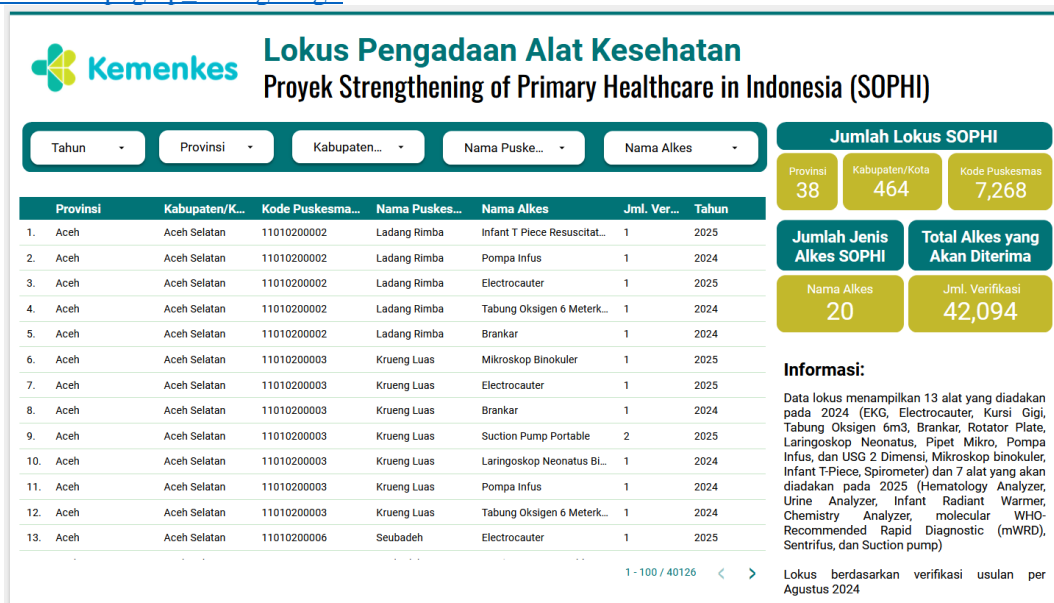

Figure 3 Screenshot of Verification Desk Results (August 2024)

Although the objectives of the SOPHI program are highly strategic, its implementation in the field faces various challenges. A study conducted byDirectorate of Monitoring, KPK (2024), with sampling of 30 Community Health Centers in 11 Districts/Cities in 6 Provinces,found a discrepancy between the planning of needs and the realization of medical equipment assistance at Community Health Centers (Puskesmas). Many Puskesmas proposed medical equipment that they actually already had in sufficient quantities, but were still proposed for assistance (69% of sample Puskesmas submitted equipment they already owned). Conversely, some health facilities received medical equipment that did not meet their needs or that they had never proposed, indicating that the allocation of assistance was not well-targeted (45% of sample Puskesmas received equipment that was not proposed). This problem was triggered, among other things, by the Puskesmas management's strategy of proposing "as much as possible" with the assumption that not all proposals would be fulfilled, resulting in duplication of proposals for equipment that was actually available. On the other hand, there were also cases of duplication in the provision of medical equipment; approximately 31% of sample Puskesmas were recorded as having previously received the same equipment from other sources (local government assistance or BLUD funding) before receiving SOPHI assistance. This condition indicates that the process of planning and coordinating medical equipment needs has not been running optimally, potentially leading to overlapping and ineffective assistance.

Supporting planning factors also hampered the implementation of SOPHI. Data collection on medical device needs through the Ministry of Health's information system remains inaccurate. The ASPAK (Application for Facilities, Infrastructure, and Medical Devices), designed to map medical device inventory, is not being fully utilized for its intended purpose. All sample community health centers (Puskesmas) in the KPK study failed to accurately record the quantity and condition of medical devices in the ASPAK system. As a result, the data used to plan aid distribution did not reflect actual conditions on the ground. For example, the KPK team found discrepancies between ASPAK data and the reality in several Puskesmas: some devices were listed as missing in the application, even though they were actually available during field visits. This inaccurate inventory data hindered the Ministry of Health from accurately prioritizing aid. In addition to data collection issues, the readiness of facilities at recipient Puskesmas is also a crucial issue. Many Puskesmas, especially those in remote areas, lack adequate supporting infrastructure to operate the provided medical equipment. The KPK reported that approximately 45% of sample Puskesmas were unprepared to receive medical device assistance due to limited facilities and infrastructure, such as electricity and space. Advanced medical devices require a stable power supply and standard installation space; without these prerequisites, the devices received risk not being used optimally. This situation impacts health services: Community Health Centers (Puskesmas) that are not prepared to operate the provided equipment will experience obstacles in providing health services, resulting in suboptimal service quality. Finally, the distribution and procurement

mechanism for medical devices under the SOPHI program creates potential inefficiencies. The Ministry of Health's policy of providing equipment packages (a set containing several items) to Puskesmas, including relatively low-value devices, has proven to be inefficient and uneconomical. Providing assistance in sets risks waste, as not all of the devices in a package are needed by the recipient facility. For example, to obtain a single required device (such as an infantometer for maternal-child health services), Puskesmas are forced to accept a package of anthropometric equipment containing several other devices that may already be owned or unnecessary. Furthermore, the centralized procurement plan for low-value medical devices (under Rp 5 million) is considered inefficient. The cost of distributing small devices to thousands of Puskesmas across Indonesia is very high; in many cases, shipping costs to remote Puskesmas are more expensive than the unit price of the medical device itself. This concept of centralized procurement, instead of saving budget, has the potential to cause inefficiencies in distribution costs and should be optimized by involving local funding.

LITERATURE REVIEWS

Universal Health Coverage (UHC) is a fundamental concept in health systems that aims to ensure that every individual, regardless of social or economic status, has access to the health services they need without facing financial hardship. In addition to improving individual health, UHC also contributes to social and economic stability by reducing poverty caused by high health care costs.(Mboi, 2015). With UHC, it is hoped that people can access quality basic health services such as disease prevention, basic care, and treatment without worrying about high costs. UHC emerged as a response to the unequal access to health services that occurs in various countries, especially among low-income communities who often face financial and geographical barriers. As one of the important targets in the 2030 Sustainable Development Goals (SDGs), UHC aims to reduce global health disparities and improve social and economic well-being.(World Health Organization, 2018). Several previous studies on UHC have aimed to understand and identify the various factors influencing the success of UHC implementation in various countries, including the obstacles and opportunities. These studies have sought to:

1. Evaluating UHC Policy and Implementation
   Research aims to evaluate how UHC policies are implemented in various contexts, assess the effectiveness of national and local strategies, and identify the role of policies in achieving equitable and quality access to health services. An example is research conducted byMboi, (2015).

2. Analyzing Challenges and Obstacles
   Many studies aim to identify key challenges to achieving UHC, such as limited funding, inadequate health infrastructure, disparities in the distribution of health workers, and barriers to decentralized systems and inter-agency coordination. An example is research conducted byAgustina et al., (2019).

3. Assessing the Quality and Availability of Health Services
   This research aims to assess the availability and quality of primary health care services, and to explore the impact of primary care services, such as community health centers (Puskesmas), in reducing the burden on secondary health facilities through prevention and early treatment. An example is research conducted byMahendhata et al., (2017).

4. Exploring the Supporting Factors of UHC
   These studies aim to identify factors that support the achievement of UHC, such as the role of political leadership, government commitment, collaboration between the public and private sectors, and the development of health information technology and systems. An example is research conducted byMaeda et al., (2014).

5. Providing Recommendations for Achieving Sustainable UHC
   The ultimate goal of many studies is to provide evidence-based recommendations to help countries strengthen their health systems, thereby supporting the achievement of inclusive, effective, and sustainable UHC. An example is research conducted byPisani et al., (2017).

Overall, these previous studies aim to support better policy formulation, promote efficient funding, and create strategies that can improve the quality and equity of healthcare access for all. Below are some previous studies related to UHC. This previous research was then mapped into a literature mapping matrix based on research topic variables. The matrix revealed that research on Universal Health Coverage (UHC), conducted using various research methods, did not focus on identifying potential corruption in the implementation of health system strengthening policies to support UHC achievement in primary healthcare facilities.

Previous research on UHC has focused on UHC policy analysis, UHC financing, healthcare facilities and services, medicines, education, and technology utilization. While some UHC studies focusing on healthcare facilities discuss the importance of ensuring adequate medical equipment, there has been no specific study identifying issues

in the provision of healthcare infrastructure in primary healthcare settings, such as the SOPHI Program. This presents a relevant gap for further research and provides recommendations to the government to ensure transparent, targeted, and compliant implementation of health system strengthening policies for primary healthcare services at Community Health Centers (Puskesmas). This research will focus on the implementation of government policies to increase UHC coverage by strengthening primary healthcare facilities/community health centers (Puskesmas) by providing medical equipment that meets established standards. This research uses qualitative methods. Below is a literature mapping matrix to identify relevant gaps for further research.

The difference between previous research and this study is that previous research has extensively discussed Universal Health Coverage (UHC) from various aspects such as policy, financing, health facilities, health services, medicines, education, and technology. However, no study has specifically highlighted the problems in the procurement of medical devices in primary health care, including in the SOPHI Program. This study fills this gap by focusing on the implementation of government policies to strengthen primary health care facilities through the procurement of medical devices that meet standards, while simultaneously identifying problems in the process. Using a qualitative approach, this study emphasizes the importance of transparency and accountability in the procurement of medical devices to ensure the effectiveness of the policy and prevent misuse. The results of this study are expected to provide recommendations for the government in improving the governance of medical device procurement to be more transparent and in accordance with regulations in supporting the achievement of UHC.
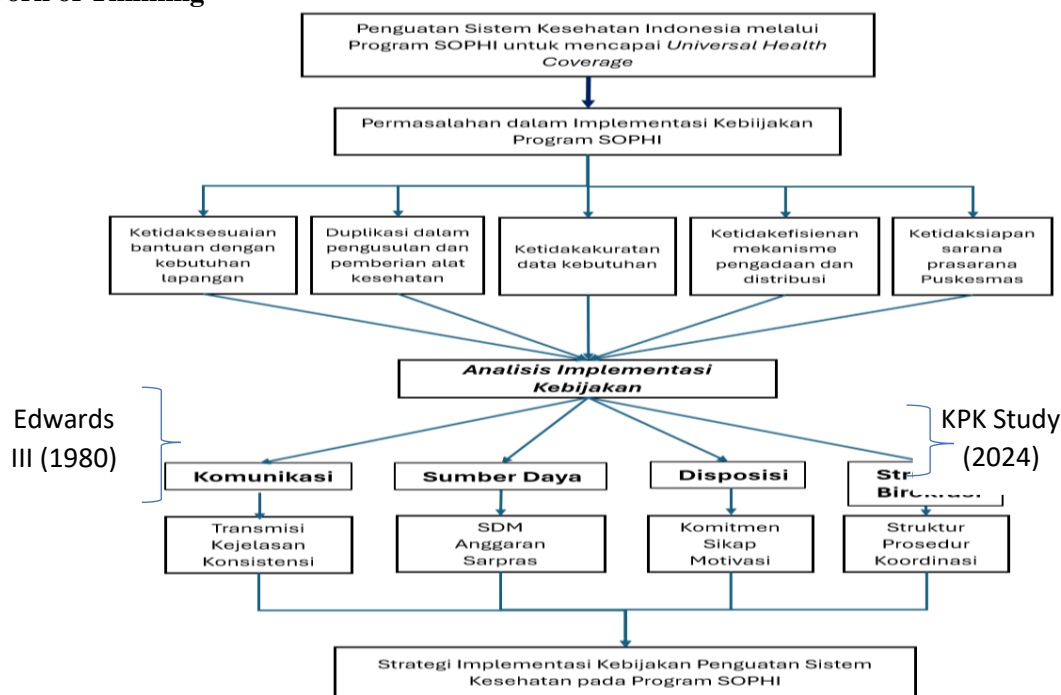
Framework of Thinking

Figure 4 Source of KPK Study on SISOIN Program (2024) and Edwards III (1980) reprocessed

METHODS

A. Research Approach

This study uses a post-positivist approach with qualitative methods to in-depth explore the potential risks of corruption in the implementation of the Indonesian health system strengthening policy through the SOPHI (Strengthening of Primary Healthcare in Indonesia) Program. This approach was chosen based on its objective, which focuses on a comprehensive understanding of complex phenomena that are difficult to measure solely with numbers or other absolute methods, such as bureaucratic dynamics, motivations, perceptions, interests, and behaviors of policy actors. Qualitative methods were chosen because of their flexibility, allowing researchers to explore complex causal factors, adapt to field situations, and develop new questions in accordance with initial research findings. In this case, researchers, as the main instrument, can interact directly with informants and adjust data collection techniques based on evolving dynamics in the field.(Creswell John W, 2009). Thus, the post-positivist approach and qualitative methods provide an opportunity to conduct an in-depth exploration of corruption risks, produce a holistic

understanding, and provide relevant practical recommendations in public policy-making related to the implementation of the SOPHI Program.

B.   Data collection technique

Data collection is the systematic steps taken to gather relevant information from various sources in qualitative research. This process involves selecting data collection strategies such as observation, interviews, document analysis, and visual materials, as well as determining the most relevant locations, participants, or documents to answer the research questions.Creswell John W, (2009) emphasizes the importance of using a purposive sampling approach to purposefully select participants or locations to gain in-depth insight into the phenomenon being studied. This procedure also includes detailed planning for ethically managing and documenting data, using specific protocols to ensure the consistency and quality of the data collected. For this study, the data collection techniques used were:

1.   In-depth Interview

To gain a deeper understanding of the implementation of the SOPHI program, primary data were collected through in-depth, unstructured interviews with key informants from all parties involved in the program. These interviews focused on gathering information about the implementation process of the SOPHI Program, particularly the planning stage for the preparation of medical device procurement, from the perspective of the actors involved, using the Edwards III approach and Corruption Risk Assessment as an analytical framework. Furthermore, the interviews were also directed at formulating recommendations for improvements in order to mitigate the risk of corruption in the future implementation of the policy.

Key informants in this study were selected using a purposive sampling method, involving individuals deemed to possess in-depth knowledge and relevant experience related to the implementation of the SOPHI Program. The local governments selected to serve as informants for the SOPHI Program were the Community Health Centers (Puskesmas) that were sampled for the KPK Study in 2024 and that received the largest number of medical equipment assistance in West Java and Jambi Provinces. Jambi Province was also selected as a sampling location to represent peripheral areas.

2.   Document Review

Secondary data to support the research was obtained through literature and SOPHI program documentation, including:
   a.   Recapitulation of the results of data collection on medical equipment needs by the Directorate General of Public Health
   b.   Data on the availability of medical equipment at the Community Health Center recorded in the Health Facilities and Infrastructure Application (ASPAK).
   c.   Data on medical device proposals by the Health Service to the Ministry of Health
   d.   Official letters related to the SOPHI Program
   e.   Regulations related to the SOPHI Program
   f.   Letter of Recommendation from the Association of Medical Device Entrepreneurs

C.   Data Processing Techniques

Data processing in qualitative research according toCreswell John W & Creswell J. David (2018),is a systematic, dynamic and flexible process that involves organizing, coding, developing themes, and interpreting findings from the data that has been collected. The steps for qualitative data analysis for the SOPHI Program are as follows:
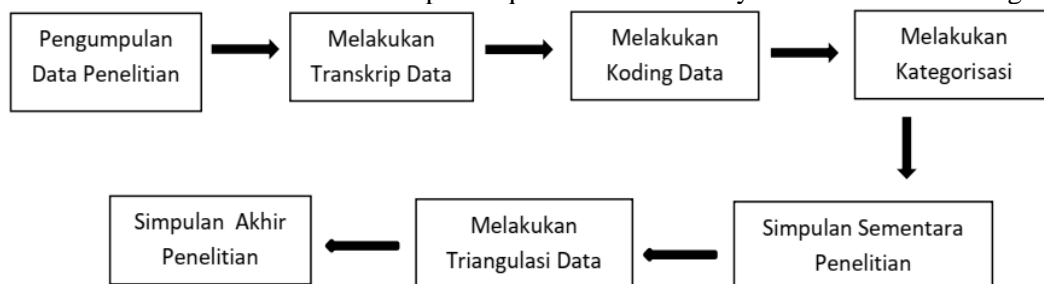

Figure 3.1. Data Processing and Analysis Stages (Irawan, 2006)

1.   Raw Data Collection

Data and information were collected through key informant interviews, document reviews, and spatial data analysis. The information collected covered the SOPHI Program's planning, implementation, issues related to governance and corruption, and performance achievements.

2. Research Data Transcript

Data obtained from interviews, document reviews, and spatial data are transcribed verbatim, that is, transferred into text form according to what the informant or document said.

3. Research Data Coding

The transcribed data was reviewed to identify key information relevant to the research focus. This information was then recorded and coded to facilitate data organization.

4. Research Data Categorization

The coded data was simplified by connecting key keywords or concepts into specific categories. This process was guided by the research framework to help researchers draw conclusions.

5. Drawing Temporary Conclusions

Temporary conclusions are drawn based on the results of data processing without any interpretation by the researcher. These are initial conclusions derived purely from the analyzed data.

6. Data Triangulation

Data triangulation is performed by comparing information obtained from various sources. This process yields three possible outcomes: (a) data across sources is consistent (coherent), (b) data from different sources does not contradict each other, or (c) data from different sources shows significant differences. In this study, triangulation was performed by comparing interview results between informants, as well as interview results with document reviews and spatial data.

7. Drawing up a Final Conclusion

The final conclusions represent the crystallization and conceptualization of field findings, structured within the research framework. These conclusions were formulated through in-depth data processing and analysis, supported by research instruments to ensure the research yields valid and structured findings.

D. Research Instruments

A research instrument is a tool used to collect data in a study. This instrument is a very important element because without it, the research would not be able to proceed, and the necessary data and information would not be obtained. In this study, the researcher himself acted as the observer.as the main instrument (Creswell John W & Creswell J. David, 2018). In addition, researchers are supported by:

1. In-depth interview guide with key informants, compiled based on the theoretical framework and research framework.
2. A guide to document review, referring to relevant concepts and theories.

RESULTS AND DISCUSSION

A. Research Results and Discussion

This section presents the results of research and discussion on the implementation of the Strengthening of Primary Healthcare in Indonesia (SOPHI) Program in the Ministry of Health, with a focus on analyzing the SOPHI Program in the Ministry of Health, especially in terms of planning the needs and distribution of medical devices in Community Health Centers and identifying the causes of the mismatch between planning and the need for medical devices in Community Health Centers. The discussion is structured by referring to the theoretical framework of George Edwards III's policy implementation which emphasizes four key factors for successful implementation, namely Communication, Resources, Disposition (Attitude/Commitment), and Bureaucratic Structure. Each factor is analyzed for its role in influencing or causing problems in the implementation of the SOPHI Program, supported by empirical data from interviews with 10 (ten) key informants. Each subchapter below examines one factor of Edwards III implementation in depth. The analytical narrative is accompanied by field findings and direct quotes from informants to strengthen the argument. At the end of the chapter, a summary table of the main findings based on these four factors is presented as a summary of the discussion.

1. Communication in SOPHI Implementation

According to Edwards III, effective communication is a key prerequisite for successful policy implementation. Communication factors include transmission (delivery of instructions from the central government to implementers in the field), clarity (the clarity and consistency of policy information), and the regularity of communication between relevant actors. Research findings indicate that communication barriers play a significant role in the mismatch

between medical device assistance and the actual needs of Community Health Centers and the duplication of medical device proposals/provisions within the SOPHI Program.

a. Clarity and Consistency of Instructions.

Based on interviews, communication from the Ministry of Health regarding the SOPHI Program in the early stages was still perceived as incomplete and inconsistent by regional implementers. An informant from the Corruption Eradication Commission (IK2) revealed that there was a lack of uniformity in understanding at the regional level regarding central government instructions, including different media and methods for proposing medical devices. Some Health Offices received instructions using Google Sheets, while others used the "Studio Locker" application to submit medical device proposals. This indicates that the Ministry of Health instructions were not communicated consistently, resulting in confusion in the regions: "The instructions from the Ministry of Health received by the regions were not complete, so the regions had quite different ways of planning SOPHI assistance applications." As a result of this inconsistent communication, the medical device proposal mechanism varied, with some regions submitting the application process twice, and others only once, without clear standards. This inconsistency has the potential to lead to duplication of proposals (due to inconsistent procedures) and proposals that do not meet needs (due to unclear instructions).

In line with the findings above, informants at the Community Health Center (Puskesmas) level also experienced changes and inconsistencies in the method of proposing medical devices throughout the program's implementation. The Head of the Kebon Kopi Community Health Center (IK8) in Jambi City reported that the proposal mechanism frequently changed, and data requested by the central government was repeated or re-completed several times. Although the initial information was considered clear, the changing policies caused confusion: "The information provided was clear enough, but the problem was consistency. So the method of proposing medical devices changed, sometimes they were asked to repeat it." These mid-course changes indicated a lack of consistent program communication, requiring regions to make repeated adjustments. This resulted in the potential for inaccurate medical device proposals due to constantly changing formats and data requests.

b. Transmission and Communication Range.

In terms of transmission, the Ministry of Health relies on the Health Office as a communication channel extending to the Community Health Center (Puskesmas) level. Socialization of the SOPHI Program is generally conducted online (virtually) via teleconference (Zoom) involving provincial/district/city health offices. This one-way communication pattern creates obstacles to uneven information dissemination. Informants from the Corruption Eradication Commission (KPK) explained that the Ministry of Health's communication pattern is primarily directed to the Health Office and does not directly reach the Community Health Centers. As a result, there is variation in implementation: some Health Offices forward instructions by asking Community Health Centers to conduct self-assessments, while others are completely unaware of the SOPHI Program. The KPK discovered a case where a region proposed medical equipment assistance, but the head of the community health center in question admitted to "never having requested medical equipment assistance." It turns out that the proposal was filled out unilaterally by the Health Office without coordination with the Community Health Center, possibly due to a tight deadline or simply the Health Office's initiative to ensure they don't miss an opportunity (IK2). This type of practice is highly risky. Communication that doesn't reach the health facility level renders medical device proposals invalid, and the proposed items may not actually be needed by the health center. As a KPK informant acknowledged,

"The existence of different schemes in each region is one of the reasons why medical device proposals don't meet needs. Communication should reach healthcare facilities. However, if it doesn't, the data on medical device proposals received by the Ministry of Health may be of low validity."

These limited communication reach are also exacerbated by geographic and infrastructure constraints. In several remote districts, online communication methods are less than optimal. The Corruption Eradication Commission (KPK) noted that the Ministry of Health's assumption that all areas are urban (with internet access and short distances) is incorrect. "Communication patterns cannot be implemented in peripheral areas, rural areas, and small islands," necessitating an adjusted approach. The Garut Regency Health Office (IK5) also highlighted the lack of face-to-face communication. They stated that most outreach was conducted via Zoom, with only one in-person meeting (in Bogor) regarding the technical aspects of the medical equipment grant (IK5). With sudden and infrequent online communication, regional understanding of the program is lacking.

c. Implications for Mismatch and Duplication

Overall, communication weaknesses have significantly impacted two implementation issues. Unclear and changing instructions led to mismatches. For example, equipment needed by the Community Health Center (Puskesmas) was not proposed due to lack of information or miscommunication, as acknowledged by the Jambi City Health Office (IK7): "Sometimes it's not synchronized, why the equipment we need isn't proposed." Conversely, duplication of proposals occurs when instructions are unclear, leading regions to "take every opportunity" to propose medical devices even though they already have them (an example will be described in the Disposition factor), or when weak coordination results in a single item being proposed twice through different channels. This is consistent with the results of a review of the Jambi City Government's medical device assistance proposal documents compared to the medical device ownership data in the ASPAK application (Document Review 2), which stated that 25 medical devices were already owned and recorded in the ASPAK belonging to the Kebon Kopi Community Health Center in Jambi City, yet the Jambi City Government still submitted a medical device assistance proposal to the Ministry of Health through the SOPHI Program. Furthermore, one medical device needed by the Kebon Kopi Community Health Center was not proposed to the Ministry of Health.

Meanwhile, the DKI Jakarta Health Office (IK3) proactively anticipated this by reminding its staff: "if you have proposed it in SOPHI, do not propose the medical device in the APBD and BLUD to avoid duplication or double proposals." This message shows the awareness that without good communication between central and regional programs, the risk of duplication of medical device funding/procurement is very high. This is also in accordance with the results of the review of the medical device proposal documents owned by the DKI Jakarta Government, which found no duplication between the medical devices owned and the proposed medical devices (Document Review 4).

In summary, ineffective communication factors, characterized by inconsistent instructions, limited information coverage, and weak internal communication coordination, contribute to mismatched medical device provision and duplication of proposals. Improving communication is crucial for policies to be implemented as designed.

2. Resources in SOPHI Implementation

Resource factors include all resources that support implementation, including financial resources, human resources (HR), infrastructure, and information. In the context of the SOPHI Program, several resource issues emerged prominently: (a) the validity and utilization of data/information (especially through the ASPAK application) as the basis for proposing medical devices, (b) the adequacy and competence of implementing HR (at Community Health Centers, Health Offices, and central government), (c) the availability of budget and supporting facilities (e.g., for verification and distribution), and (d) the readiness of infrastructure at health facilities receiving medical devices. Deficiencies or weaknesses in these resource aspects have been shown to be the root cause of medical device assistance that does not meet needs and the duplication of medical devices.

a. Data Validity and Information Systems (ASPAK)

ASPAK (Application for Medical Equipment Facilities and Infrastructure) is the primary information system used by the Ministry of Health to map the need for infrastructure and medical devices in health facilities. However, research findings indicate serious constraints related to the validity of ASPAK data. The Secretary of the Directorate General of Health and Communication, Ministry of Health (IK1), acknowledged that data on the availability of medical devices at community health centers (Puskesmas) in ASPAK frequently changes and is inconsistent. Even periodic verification efforts conducted by the center every 2-3 months have not been able to stabilize the data, "ASPAK data is always changing, almost a year like that. It is very difficult to fix data on medical device needs." One of the causes, as explained by the informant, is opportunistic data entry behavior. "When our friends at the Community Health Center (Puskesmas) are undergoing accreditation, they'll complete their ASPAK data, making it seem like they have all the medical equipment. But when they ask for medical equipment proposals, they say they don't have any, which creates a gap. They asked for this yesterday, but now they keep asking again." This could potentially lead to duplication of requests for medical devices from year to year, as the need appears unmet even though assistance has already been provided. Conversely, overly optimistic data during accreditation could lead the center to assume the need already exists, leading to mismatched allocations.

The KPK's findings confirm the validity issues with the ASPAK data. From the KPK's field study, 100% of the sampled Community Health Centers (Puskesmas) did not fill out ASPAK data according to actual conditions. A concrete example: in ASPAK, it was recorded that a Puskesmas had a stretcher (a patient's wheelchair), but after checking, it turned out that the stretcher was damaged or missing. There were also those listed in ASPAK

as having one sterilizer, but in the field, they actually had two new, unused units (IK2). Things like this show that the data on paper is very different from the reality. The KPK emphasized, "ASPAK, which should be able to show the real needs of infrastructure in health facilities, in reality, the validity of the data in ASPAK is far different from the conditions in the field." Due to inaccurate data, the potential for medical equipment assistance to be misdirected is very high, both over-supply (providing equipment that is actually available/not yet needed) and under-supply (needed equipment is not listed for assistance).

Another contributing factor is suboptimal system utilization. The Corruption Eradication Commission (KPK) highlighted that the aid planning process should rely on ASPAK data, but in practice in 2024, the Ministry of Health used various separate tools (such as Google forms) instead of maximizing ASPAK. This is conveyed in the quote: "The Ministry of Health has an ASPAK application, but we see that the application for proposing medical devices is also not firm and clear. The Ministry of Health uses different applications, and this is quite confusing for the regions." This means that existing information system resources have not been optimized, resulting in duplicative proposal processes (required to be refilled outside of ASPAK) and opening up gaps for inconsistencies. The Ministry of Health itself only transferred ASPAK management to the Directorate General of Health and Communication (which oversees Community Health Centers) in 2024, and began to recognize the many system weaknesses that needed to be addressed. From the reflection of central officials, several issues were identified, namely the room standards and medical equipment standards of the Community Health Centers frequently changed (causing data indicators to change), the absence of data security features (for example: ASPAK did not have a historical change log data, and the tiered verification chain was not running (IK1). Ideally, data inputted by the Community Health Centers would be verified by the District Health Office, then the Provincial Health Office before entering the center. However, there is a strong suspicion that this tiered verification process "is not running optimally, it seems no one is checking. The Community Health Centers can easily manipulate ASPAK data" (IK1). The failure of this data verification mechanism reflects the limitations of supervisory resources which in turn makes the data on medical equipment needs unreliable.

b. Human Resources (Quantity and Capability)

The implementation of the SOPHI program involves human resources at various levels, including community health center staff (ASPAK managers and medical device users), the verification team at the Health Office, and technical staff at the central level. This study found that limited human resources, both in terms of quantity and competence, contributed to implementation issues. At the Community Health Center (Puskesmas) level, human resources for asset recording and management are very limited and poorly trained. The Corruption Eradication Commission (KPK) observed that asset/medical equipment recording is often considered a mere additional task by the Puskesmas, so it is not taken seriously. Many Puskesmas appoint ASPAK officers from among staff who are already busy with services, sometimes even new employees or interns are made responsible for ASPAK (IK1). The impact is high turnover of ASPAK officers and their competency is low. A KPK informant stated: "employees who are appointed PIC ASPAK are sometimes new employees, even interns, if asked about the validity of the inputted data, they will have difficulty," resulting in data input that does not match field conditions. Similar findings were expressed by the Garut District Health Office (IK5):
"ASPAK officers at the Community Health Center (Puskesmas) frequently change; many request replacements, perhaps due to their heavy workload, service requirements, and reporting requirements. Ideally, there should be someone specifically responsible for ASPAK management to ensure more accurate data."

Without dedicated human resources, data tends to be entered haphazardly during busy schedules, leading to data entry errors. Regarding the duplication issue, the Garut Regency Health Office explicitly linked it to human resource factors. The turnover of ASPAK officers and inaccuracy resulted in existing medical devices being overlooked and therefore re-proposed (IK5). Similarly, delays in data updates due to procrastinating human resources contributed to devices already received being listed as needed. The Secretary of the Jambi City Health Office (IK7) acknowledged this weakness: "Our colleagues updated the ASPAK data late, so some data was missed. Why were existing medical devices re-proposed? That's what happened in 2024, and we acknowledge the weakness." Clearly, the lack of discipline and human resource competency in data management led to duplication of proposals and inconsistencies in aid.

At the Health Office level, limited human resources and time are also obstacles. The Garut Regency Health Office (IK5), which oversees 67 Community Health Centers (Puskesmas), stated that thoroughly verifying the accuracy of ASPAK data at all Puskesmas "could take more than 3 months." They even stated that verifying just one Puskesmas should ideally take a full day. This situation indicates that the available human resources are not commensurate with the verification load. As a result, verification is often carried out in a haphazard manner (for

example, via online desk review only) and is incomplete. This opens up opportunities for data errors, such as equipment that should have been recorded being missed or the condition of the equipment (whether it is still suitable or not) not being correctly identified. The results of the review of the documents for submitting medical device proposals for Bogor Regency also revealed that 9 medical devices were proposed that were already owned, and 4 medical devices that were not proposed that were not owned (Document Review 1).

Furthermore, because the central government fully delegates the verification of proposals to the regions, the burden on regional human resources increases. The Corruption Eradication Commission (KPK) believes that central government human resources are actually quite competent and have the tools for verification, but due to limited resources and efficiency, the central government delegates verification to regional governments. This is a double-edged sword: on the one hand, it speeds up the central process, but on the other hand, if regional governments lack adequate human resources, the quality of verification declines.

c. Supporting Facilities and Infrastructure and Budget

Resource factors also include infrastructure support and operational budgets. Some key findings include:

1) **Budget and facilities for field verification**Several Health Offices admitted they did not have a specific budget to verify medical device needs directly at Community Health Centers (Puskesmas). The Muaro Jambi District Health Office (IK9), for example, stated that "there is no budget for the SOPHI Program." With 23 Community Health Centers spread out and limited internet access in certain areas, they were forced to invite Community Health Center officers to the Health Office office to update data, as they were unable to visit all facilities due to budget and time constraints. Online verification was carried out, although it was less than optimal. Without field visits, there is a risk of data not being validated accurately, for example, a Community Health Center reporting equipment as slightly damaged when in fact it is no longer functioning (severely damaged). The results of the suboptimal verification were evident in the fact that 34 medical devices proposed by one Community Health Center in Muaro Jambi were actually already owned by the Community Health Center (Document Review 3).

This was recognized by the Muaro Jambi District Health Office (IK9), which wanted its team involved in direct inspections during distribution to ensure the actual condition. Budget constraints were also evident at the receiving/distribution stage of medical devices. Deliveries of medical devices by central vendors directly to Community Health Centers sometimes occurred outside of working hours (even in the early hours of the morning), and the Health Office was not always able to assist due to a lack of budget for mobilizing personnel. As a result, medical devices once arrived at 2-3 a.m. only to be received by security guards without inspection (IK9). This example of weak operational resource support can lead to uncontrolled delivery of devices (possibly insufficient quantities, damaged, or not meeting specifications, only to be discovered later). The absence of a handover budget was noted as a weakness.

2) **Health Center infrastructure (electricity and rooms)**The SOPHI program provides many large or high-tech medical devices. Infrastructure readiness at community health centers (Puskesmas) is crucial for their use. Field findings indicate a diverse situation. In Garut Regency (IK5), the Health Office stated that it has made efforts to increase the community health center's electrical capacity to a minimum of 10 kVA and improve space through the regional budget (APBD). However, in other locations, some community health centers still have limited space. The head of the Kebon Kopi Community Health Center (IK8) (Jambi City) explained that community health center buildings in the region are sometimes not specifically built for services (for example, they occupy former official residences), so the placement of new medical devices requires spatial adjustments. He admitted that he was forced to move rooms and combine services to accommodate new equipment. He also mentioned that "not all community health centers have adequate space," especially for large medical devices. This lack of infrastructure means that centrally-sourced medical devices may not be optimally utilized, for example, they may have to be stored in corridors or narrow rooms, or even not installed at all if the space requirements are not met. In terms of mismatch, this means that medical device assistance does not match field conditions (medical devices are available but the supporting infrastructure is not yet ready). This is still related to planning communication, the center has actually requested readiness data (for example, a survey of Community Health Center electricity via Google Forms, as mentioned by the Kebon Kopi Community Health Center), but the initial instrument was simple (only asking for electrical voltage, not covering space and human resource aspects) (IK8). Only in 2025, supporting data requirements were tightened (attaching information on rooms, operator human resources, etc.) (IK7). This increased need for supporting data indicates that the information collected initially was

incomplete, resulting in some medical devices being planned to be sent to Community Health Centers that were not yet ready (mismatch).

3) **Limited funding for basic medical devices**Regional financial resources vary, and the SOPHI Program is designed to assist in the procurement of expensive medical devices that are difficult for regions to purchase. However, in the field, problems arise: essential medical devices that are actually needed are not included in the aid list. The Head of the Kebon Kopi Community Health Center highlighted that small items such as blood pressure monitors, examination beds, etc. are often in short supply at the Community Health Center, but SOPHI only provides certain items (focusing on expensive medical devices). He explained, "The Community Health Center has many needs, for example, blood pressure meters. Because they are not on the list, we are forced to buy them ourselves with Regional Public Service Agency (BLUD) funds. We don't even have the basic medical devices we need" (IK8). As a result, Community Health Centers with limited funds struggle to meet these basic needs, and when basic equipment breaks down (especially with programs like the Free Health Check that intensively use blood pressure monitors), services are disrupted. Meanwhile, sophisticated equipment such as ultrasounds and EKGs are supplied by the center and are very helpful, but the gap between basic needs and the program's focus shows an imbalance in resources. The impact of mismatch is that the community may still not receive optimal service even though sophisticated medical devices are available, because simple tools to support primary services are lacking.

4)

d. Implications for Mismatch and Duplication.

Based on the above description, it is clear that weaknesses in resource factors have multiple implications. Invalid data (as an information resource) results in medical devices being provided incorrectly, leading to mismatches (e.g., medical devices arriving when they were not requested or already exist) and duplication (proposing devices that are already owned because the data was forgotten to be updated). Lack of human resources and competency leads to proposal errors, for example, ASPAK officers neglecting to record previous assistance, resulting in duplicate proposals, or not carefully checking specifications, resulting in requests for devices that are actually different versions (e.g., the case of 2D ultrasound vs. "smart" ultrasound in Garut Regency, discussed in the disposition). Limited operational budgets result in lax oversight of the verification and distribution processes, opening up opportunities for duplicate or unused devices to go unnoticed. Inadequate infrastructure prevents some medical device assistance from being used optimally (a mismatch between program objectives). This important finding confirms that serious data updating and utilization (ASPAK), the addition or training of specialized human resources, and technical budget support (for field verification and distribution assistance) are prerequisites for ensuring that policy implementation is not misguided.

3. Attitude and Commitment of the Implementer (Disposition)

The dispositional factor in Edwards III's theory refers to the attitudes, commitments, and behavioral tendencies of policy implementers. Even policies with clear communication and sufficient resources can fail if their implementers lack the will or integrity to implement them according to their objectives. In the context of the SOPHI Program, the dispositions of actors, both at the central and regional levels, also influence the discrepancies in medical device assistance and duplication. Several dispositional aspects that emerge include: motivation and honesty in data collection, the mindset of "origin" versus actual needs, the discipline and initiative of implementers, and the presence or absence of incentives that encourage performance.

a. Motivation and Orientation in Proposing Medical Devices

Interviews revealed a tendency at the regional level to exploit every opportunity for assistance, even if the need is questionable. An informant from the Garut District Health Office (IK5) frankly stated, "In the regions, as long as there is an opportunity to propose medical devices, we tend to take it (propose it). Honestly, even though the medical devices are available at the health facility." This is also reinforced by the results of a document review that found that the Loewigoong Community Health Center in Bogor Regency proposed nine medical devices even though it already had them (Document Review 1). This statement indicates an opportunistic attitude on the part of some implementers in the regions, focused on acquiring goods rather than considering real needs. This attitude certainly contributes directly to the problem of duplication, namely proposing medical devices that they already have. This is confirmed by the Corruption Eradication Commission (KPK) finding that 45% of the sampled Community Health Centers submitted medical devices that did not meet their needs. "For example, they already have a dental chair, but because there is an opportunity to propose, even though they already have one and only want to replace it with a new one or have two, they submit another." In

fact, some regions feel "there is an instruction to propose even though they don't need it" (IK2). Such a disposition can arise from the fear that "if you don't ask, you won't get any." This means that implementers in the field may lack a clear understanding of the program's essence (strengthening primary care services as needed) and are more driven by project logic/budget utilization. The implication is that medical devices become overloaded or duplicated, while other, more basic needs are overlooked.

Opportunistic behavior is also evident in the case of proposing equipment with higher specifications despite already having an older version. The Garut District Health Office (IK5) cites the example of an ultrasound: "The Leuwigoong Community Health Center already has a 2D ultrasound, but it's not yet smart (it can't connect to the internet). We're having trouble deciding whether, if we already have an ultrasound like that, we can propose a newer one." Ultimately, they tend to propose based on the difference in specifications (the old ultrasound can't print images for BPJS claims, etc.). Another example is proposing a battery-operated surgical lamp because the only one available at the Community Health Center is a non-battery lamp (even though it has the same function) (IK5). The lack of clear guidelines (a communication factor) does have an impact, but it also reflects a problem in the implementer's attitude, namely caution. Instead of asking questions or considering urgency, the region tends to "just propose first" in order to obtain a more advanced version. From a program perspective, this risks waste/duplication (the old equipment still functions but requires a new one).

b. Data Honesty and Integrity.

Implementer disposition is also evident in how honestly they report data. As described in the resource factor, there are indications that Community Health Centers (Puskesmas) deliberately alter ASPAK data to suit their own interests (complete during accreditation, left blank when assistance is needed) (IK1). This action is clearly motivated; to obtain assistance, some individuals do not hesitate to lower the number of medical device ownership. The Secretary of the Directorate General of Health and Social Communication also noted the phenomenon that "ASPAK data in the first semester tends to be lowered (gaps are widened) during the DAK and SOPHI proposal periods, but in the second semester during accreditation, the gaps are eliminated" (IK1). This means that data manipulation occurs due to a lack of ownership and responsibility for the central data system. A central informant described this problem as a lack of sense of belonging: "ASPAK is an application owned by the center (Ministry of Health), so regions only fill it in when needed. Only when the Ministry of Health wants to 'share the budget' do they update ASPAK" (IK1). This lack of proactivity and only fulfilling obligations for specific interests demonstrates a low commitment from implementers to data accuracy. Consequently, decisions regarding medical device allocation are erroneous. The Ministry of Health itself recognizes this behavioral pattern as a dispositional issue, stating, "This is a behavioral issue, and it needs to be addressed." (IK1) In other words, the culture of data honesty remains weak, leading to various implementation inaccuracies (mismatches/duplications).

c. Discipline and Initiative of the Implementer.

Disposition is also reflected in the work discipline of program implementers. Several informants acknowledged a lack of discipline, for example, in updating data in a timely manner, resulting in erroneous proposals (IK7). Another example is the inconsistent application of procedures across regions. The Corruption Eradication Commission (KPK) reported differences in the implementation of SOPHI across regions, partly stemming from communication but also related to local government initiatives. Some regions proactively delegated self-assessment to Community Health Centers (Puskesmas), others passively awaited instructions, and some even took the shortcut of completing the form themselves on behalf of the Puskesmas (IK2). This variation indicates a heterogeneous commitment: some regions attempted to comply with procedures (giving the Puskesmas time to identify needs), while others paid less attention to details (as long as the form was completed quickly). Regions that did not directly involve the Puskesmas were actually risking the accuracy of their proposals, but were likely driven by tight deadlines and the belief that "the medical devices can be used anywhere anyway" (IK2). While the limited timeframe is understandable, this demonstrates a weak commitment to data accuracy, as field validation was deemed unnecessary for the sake of speed. This kind of attitude certainly risks causing medical devices to not meet needs (due to haphazard data input).

d. Incentives and Support for Implementers.

Employee disposition is inextricably linked to the incentive system. Interviews indicate that officers burdened with additional tasks (e.g., ASPAK input and data verification) do not receive special incentives. An informant

at the Leuwigoong Community Health Center (IK6) revealed that they often work overtime until the evening to collect ASPAK data without additional remuneration, "we are indeed working according to our responsibilities as civil servants" (IK6). Similarly, the Health Office does not provide special incentives for verification teams that must review hundreds of data items. This lack of incentives can affect the motivation and accuracy of implementers. Data collection work is considered a tiring extra burden, resulting in high turnover and many requesting replacements (as occurred in Garut) (IK5). The low commitment of some ASPAK officers is likely influenced by the high workload without commensurate appreciation. From a policy implementation perspective, this is crucial because field officers are the spearhead; if their motivation is low, errors or omissions are highly likely (e.g., being lazy about double-checking whether the proposed equipment is available, etc.). This lack of motivation in implementers ultimately explains why medical device proposals do not reflect actual conditions.

e.   Regional Leadership Commitment.

In addition to technical implementation, disposition also encompasses the commitment of local leaders or authorities to the program. This study found that one recommendation for implementation improvement is to involve the Regional Inspectorate and the Regional Development Planning Agency (Bappeda) in verifying proposals (at the initiative of the Ministry of Health in 2025) (IK1). This requires the support of regional heads/agency leaders for the Inspectorate to truly intervene. The fact that the Inspectorate's verification time was very short and they did not have time to visit all Community Health Centers (IK5) indicates limited structural commitment, possibly due to the Inspectorate's other priorities. However, on the other hand, regions such as DKI Jakarta demonstrated a strong commitment to preventing duplication, by formally writing to the Ministry of Health inquiring about the status of assistance and preparing adjustments to regional planning if assistance was indeed cancelled (IK3). This proactive stance by DKI Jakarta demonstrates a strong commitment to synchronizing central-regional programs. This means that variations in disposition also occur between regions, with some being responsive and collaborative, while others tend to wait or be indifferent. This variation undoubtedly impacts the quality of implementation in each region.

f.   Implications for Mismatch and Duplication.

Overall, dispositional factors explain why, despite existing systems and instructions, implementation results still deviate. Opportunistic and dishonest attitudes lead to duplication of proposals (equipment already exists but is requested again) and ineffective assistance (equipment is sent when it is not really needed, simply because of an upgrade). Lack of commitment to updating data leads to mismatches (invalid data results in equipment being sent that does not match actual needs) and duplication (old equipment is not recorded, resulting in it being sent again). Low motivation and the absence of incentives lead implementers to be careless in carrying out procedures, for example, haphazard verification results in facilities receiving equipment when the human resources or space are not ready (mismatch). This human factor is crucial, even the Health Office has realized, "if a device is proposed, there must be human resources capable of implementing it; if there are no human resources, we don't propose it" (IK9) as an effort to discipline the integrity of the proposal. This statement by the Muaro Jambi Health Office demonstrates an awareness of the alignment of medical devices and human resources, a form of positive disposition that is worth emulating. By improving disposition (through supervision, incentives, and work ethic development), it is hoped that in the future there will be no more manipulated data or haphazard proposals. A summary of findings related to disposition factors is presented in the table at the end of this chapter.

4.   Bureaucratic Structure and Coordination between Institutions

The final factor in the Edwards III framework is bureaucratic structure, encompassing patterns of authority relationships, division of tasks, standard operating procedures (SOPs), and fragmentation or cross-unit coordination. A structure that supports implementation is one with clear coordination channels, appropriate SOPs, and good synchronization across agencies. The implementation of the SOPHI Program presents unique challenges because Community Health Centers (as the objects of primary care strengthening) are under the regional government, while the program is initiated by the central government. This creates a non-hierarchical structure directly between policymakers and field implementers, making it prone to coordination gaps. Research findings reveal that bureaucratic structure factors, in this case the fragmentation of central-regional authority, differences in organizational structure, and unstable procedures play a significant role in the problem of mismatch and duplication of medical devices.

a. Fragmentation of Central-Regional Authority

The SOPHI program is run by the Ministry of Health but requires support from local governments because Community Health Centers (Puskesmas) are managed by local governments. This decentralized health structure means the Ministry of Health does not have a direct line of command to the Puskesmas. A central informant (IK1) emphasized this: "Puskesmas are not under the Ministry of Health but are part of the local government," so the Ministry of Health needs to collaborate with the Ministry of Home Affairs to ensure the program runs smoothly. At the 2023 program kick-off, the Ministry of Home Affairs was involved to encourage local governments to support SOPHI. While formally this is the right step, fragmented authority still creates coordination challenges. The lengthy and hierarchical bureaucracy (central → provincial → district/city → health office → Puskesmas) can lead to distorted or delayed information (as discussed in the communication factor). Furthermore, responsibilities are split: the central government allocates medical equipment, while the regions are responsible for providing human resources and facilities. If it is not synchronized, there will be cases where the equipment arrives but there is no personnel (for example: physiotherapy equipment is sent to a Community Health Center that does not have a therapist (IK8)), a real mismatch problem.

This fragmented structure also gave rise to sectoral egos. For example, the Corruption Eradication Commission (KPK) recommended that several regions (such as DKI Jakarta) be excluded from the target recipients because they were deemed financially capable, and the Ministry of Health followed that recommendation (IK3). For DKI, this decision was considered unfair because they are also part of Indonesia and should be able to improve their primary services (IK3). This shows that there are no standard cross-agency criteria for who is the priority recipient of aid (initially including DKI, then excluded). This lack of cohesive central-regional coordination structure created uncertainty (the DKI Health Office waited a long time for confirmation via official letter) (IK3), and had to make sudden adjustments to the regional budget plan. Although this issue was eventually resolved through an official circular, this example demonstrates the need for cross-level understanding of the program structure. Without it, there is the possibility of duplication of funding (the center assisting with something that the region could actually allocate) or, conversely, a lack of accountability (each party assumes the other is providing it) can occur.

b. Differences between Organizational Structure and Internal SOPs

The structures at the central and regional levels are not entirely parallel. Initially, the Ministry of Health relied on the Directorate General of Primary and Community Health (Kesprimkom) for its focus on primary care, while at the regional levels, the units managing Community Health Centers (Puskesmas) varied (some were in the health services sector). The Secretary of the Directorate General of Kesprimkom (IK1) explained the following obstacles:

"In the regions, the medical device management department is separate from the program implementation department. We communicate with the Head of Public Health, but the Head of the Health Resources Division (SDK) at the Community Health Center (Puskesmas) knows the medical device needs. There's no coordination between those implementing the program and those managing the medical device. The organizational structure at the Health Office isn't the same as at the Ministry of Health, so they're separate. That creates communication barriers."This statement clearly illustrates structural misalignment, as the Health Office's departments do not mirror the central government's, instructions are misdirected to inappropriate departments, needs data is not fully communicated, and coordination is slow. As a result, medical device needs data is "inconsistent" (IK1). In the context of implementation, this means that proposal procedures are not carried out as expected. For example, needs planning (usually the responsibility of the planning department or SDK) should be connected to the assistance program (the Public Health department), but instead, both are working independently. The direct implication is that the medical device proposals submitted by the regions are not in sync with actual needs. A central informant stated, "There is a gap between needs data and proposals from the regions. For example, regarding ultrasound: according to Ministry of Health data, 2,000 Community Health Centers still don't have one, but why aren't that many proposing it? Do they not need it or don't they know?" It turns out that after improving coordination (by involving cross-sectoral regional agencies such as the Inspectorate and Bappeda), proposals jumped closer to actual needs (Document Review 5). This indicates that initially, due to a scattered organizational structure and unsynchronized internal SOPs, many needs were not proposed (a mismatch of potential assistance) or some proposals were inappropriate for the situation. When the coordination structure was improved, data became more valid and aid was more targeted.

c. Standard Operating Procedures and Dynamic Mechanisms

A new program like SOPHI requires clear SOPs. The initial implementation period of 2023-2024 saw several changes to the proposal mechanism. The Garut Health Office noted, "There were slight changes. For example, initially, the equipment that could be proposed had to meet the Health Ministry's Health Center (Puskesmas) regulations, but this was later changed: only equipment costing more than Rp 5 million could be proposed; smaller items could not." This policy change in August 2024 was a standardization measure (so that only low-cost goods were procured by the regions). However, this change occurred after the initial proposal stage, requiring the regions to make sudden adjustments.

In addition, the proposed verification mechanism also underwent structural improvements in 2025, involving the Regional Inspectorate and the Regional Development Planning Agency (Bappeda). This step was taken to restructure the vertical coordination structure (the Inspectorate oversees the regions) and horizontal coordination (Bappeda links it to planning). However, the limited verification timeframe made this ideal SOP difficult to fully implement (IK5). A rigid bureaucratic structure with tight deadlines posed a challenge: the Inspectorate, as a supervisory agency, was not easily mobilized to meet the Ministry of Health's schedule. As a result, the goal of preventing duplication through independent verification was not optimally achieved (they did not have time to inspect all Community Health Centers).

d. Cross-Sector and Program Coordination.

Unclear coordination flows at the regional level also contribute to problems. The Jambi City Health Office (IK7), for example, experienced internal miscommunication due to the lack of a clear designation of the program's manager. Informants explained that the SOPHI Program was at the medical equipment needs planning stage, which should have been the responsibility of the Planning Division. However, because the needs database was in ASPAK (Application for Infrastructure and Medical Equipment) managed by the Health Services Division (Yankes), logically the Yankes Division had better understanding of the data. Meanwhile, program outreach was conducted within the Public Health Division (Kesmas) due to the nature of the program's assistance to primary health centers (Puskesmas) (IK7). Due to this overlapping communication structure, "there were coordination problems between the Planning Division, the Yankes Division, and the Kemas Division," resulting in inadequate information being conveyed internally within the Health Office (IK7). This situation explains why there were cases of inappropriate proposals or distribution of medical equipment, as disrupted cross-sectoral communication hampered the synchronization of actual needs with official proposals. At the community health center (Puskesmas) level, program miscoordination occurs, for example, with the Free Health Check (CKG) Program. The Kebon Kopi Community Health Center (Puskesmas) reported that the CKG program was already underway even though the planning for human resources and medical devices had only just been proposed, forcing them to use makeshift equipment (IK8). This inconsistent timing between programs creates a burden: the CKG equipment has not yet arrived (SOPHI has not been implemented), but the program is already underway (service pressure is increasing). This highlights the need for an integrated planning structure across central programs to ensure synchronization. Otherwise, the Puskesmas could receive tasks (programs) without the resources (medical devices), clearly a mismatch in implementation.

e. Implications for Mismatch and Duplication

From a bureaucratic perspective, it can be concluded that discrepancies and duplication in medical device assistance largely arise from structural gaps. The absence of a direct chain of command makes central oversight difficult, data can be manipulated (duplicate proposals) without sanction, and the central government is uncertain about the region's true need (some do not propose despite need, due to a lack of internal coordination). Differences in central and regional organizational structures lead to asynchronous information on needs, resulting in mismatched or failed aid distribution. Inadequate standard operating procedures (SOPs) and weak procedural coordination contribute to duplication (e.g., failure to follow asset recheck procedures, resulting in duplicate equipment being sent) and mismatching (e.g., equipment being sent to unprepared locations).

Structural improvement efforts, such as standardizing the medical device list, involving the Inspectorate/Bappeda, and coordinating with the Ministry of Home Affairs, have shown positive results. Following the improved coordination structure, the Ministry of Health reported that proposed data is becoming more organized and aligning closely with actual needs (IK1). This confirms that a well-organized bureaucratic structure (with clear coordination channels, defined roles for each actor, and clear SOPs) will prevent future mismatches and duplication.

CONCLUSION

IMPLEMENTATION ANALYSIS OF INDONESIA'S HEALTH SYSTEM STRENGTHENING POLICY: A CASE STUDY THE SOPHI PROGRAM AT THE MINISTRY OG HEALTH
Kunto Ariawan and Bambang Giyanto

A. Conclusion

Based on the research results, it can be concluded that the implementation of the Strengthening of Primary Healthcare in Indonesia (SOPHI) Program encountered serious obstacles, resulting in inaccurate targeting of medical equipment (a mismatch between proposals and actual needs at community health centers) and duplication in the proposal/procurement of medical equipment. These problems can be summarized as follows:

1. **Communication Aspects:** The communication mechanism for SOPHI policies from the central government to the regions has been ineffective. Instructions are often inconsistent and changing, and do not reach the community health center (Puskesmas) level. This has resulted in confusion in the regions regarding the medical device proposal process; some proposed medical devices do not align with the actual needs of the Puskesmas. A one-way communication pattern through the Health Office without direct outreach to facilities results in incomplete information being conveyed. This contributes to mismatched proposals with field needs and even duplication of equipment proposals/provisions (the same equipment is proposed or received more than once).

2. **Resource Aspects:** Limited resources, particularly in terms of data and human resources, are another contributing factor. The validity of medical device needs data is low because the Medical Infrastructure and Equipment Application (ASPAK) is not filled out and utilized optimally. All sample community health centers (Puskesmas) found by the Corruption Eradication Commission (KPK) failed to update ASPAK data to reflect actual conditions, resulting in inaccurate aid planning. Furthermore, limited human resource capacity (the number and competence of medical device data management staff at Puskesmas and the Health Office) often results in data being inputted haphazardly. Limited operational budgets also hamper verification and distribution, while recipient infrastructure readiness is often overlooked. This resource crunch results in much of the medical device assistance provided not meeting needs (e.g., equipment being sent to Puskesmas that already have it or don't need it) and duplication of procurement.

3. **Aspects of Implementer Attitude and Commitment (Disposition):** The disposition of program implementers at both the central and regional levels also contributes to implementation problems. Opportunistic motivations and behaviors of some implementers lead to biased data and proposals. For example, there is a tendency to propose equipment that is not actually needed for fear of missing out on assistance, as well as data manipulation (leaving blank asset data in ASPAK to obtain assistance or filling in data as if it is complete during accreditation). The lack of a culture of honesty and discipline in data collection (frequent lateness or reluctance to update data) worsens the validity of the information. This is exacerbated by the lack of incentives and additional workloads that are not supported by appreciation, resulting in low officer commitment. Overall, this weak disposition of implementers results in proposals that do not reflect actual conditions and duplicate or unused medical device assistance because implementers are more focused on administrative fulfillment than on substantive needs.

4. **Bureaucratic Structure Aspects:** The gap and fragmentation in the central-regional bureaucratic structure is a fourth factor affecting the implementation of SOPHI. The absence of a direct chain of command from the Ministry of Health to Community Health Centers (because Community Health Centers are under the regional government) complicates coordination and oversight. This decentralized structure splits responsibilities: the central government provides equipment, while the regions provide human resources and supporting facilities. A lack of synchronization leads to mismatches (e.g., equipment is sent but the supporting personnel or facilities are not yet available). Differences in organizational structure between the central and regional agencies (the units handling the program are not always the same as those managing facilities in the regions) lead to ineffective distribution of needs information. Instructions from the central government often "go astray" to inappropriate areas within the Health Office, resulting in miscoordination of needs data with proposals. Furthermore, the lack of established standard operating procedures (SOPs) at the start of the program (frequent changes and limited implementation/verification timeframes) complicates implementation in the field. This fragmentation and bureaucratic rigidity results in poor alignment between agencies: mismatches between aid and needs and duplication of proposals due to a lack of cross-unit coordination. Improvement efforts have already begun (e.g., involving the Ministry of Home Affairs, the Regional Inspectorate, the Regional Development Planning Agency (Bappeda), and standardizing the medical device list), and it has been proven that when the coordination structure is improved, the proposed data becomes more valid and closer to actual needs. This confirms that a well-organized bureaucratic structure (clear coordination channels, clear role divisions, and robust SOPs) is essential to prevent future mismatches and duplication in program implementation.

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