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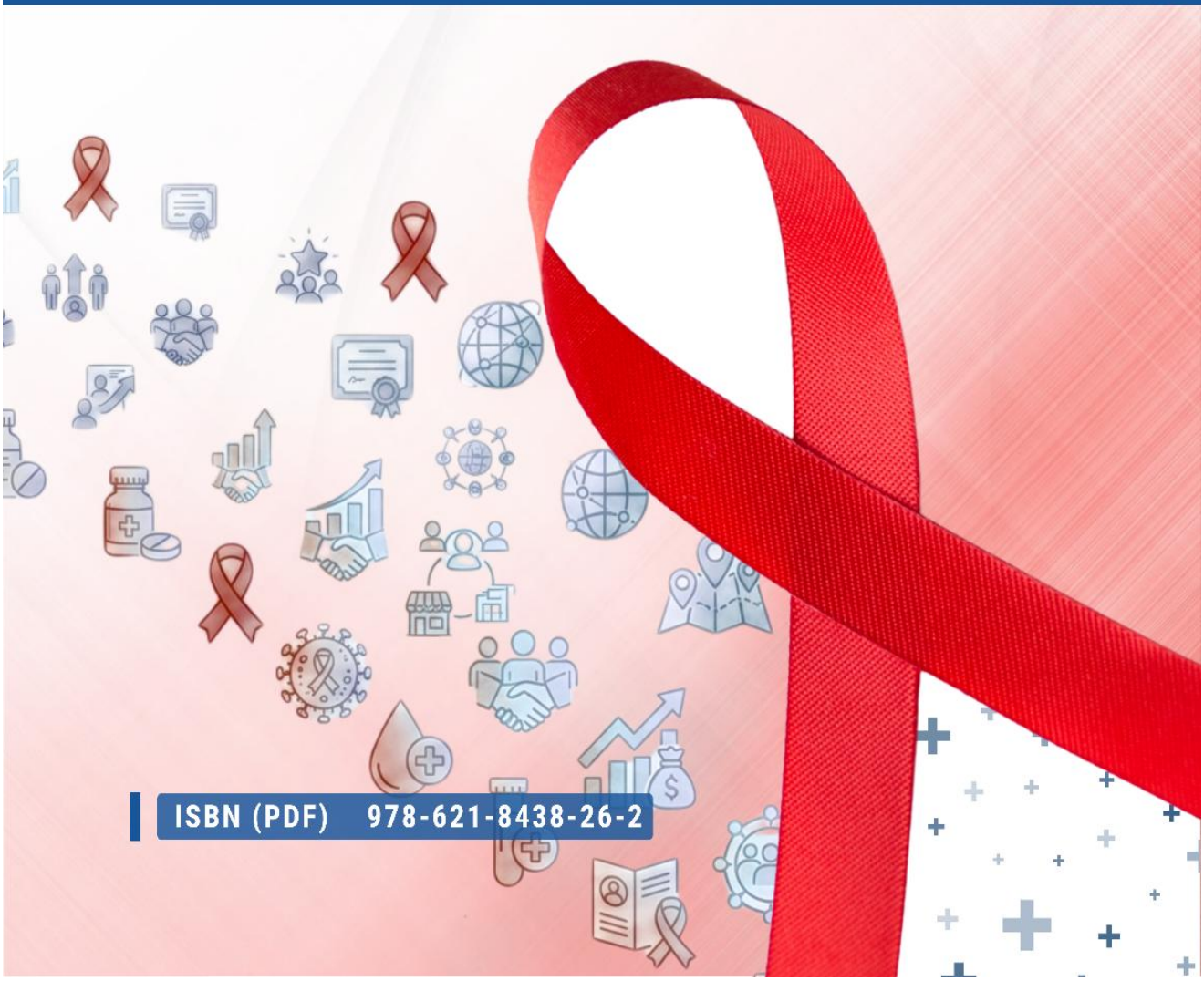
Rethinking HIV-AIDS Policy

Human Resources, Social and Economic Inequalities, and Geographic Disparities in Public Health Governance

Authors : Nana N. Nadarsyah I Lisda N I M. Arief A



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FOREWORD

Head of the Regional Research and Innovation Agency of South Kalimantan Province

All praise and gratitude be to God Almighty, because with His grace and blessings, this book, "Rethinking HIV/AIDS Policy: Human Resources, Social and Economic Inequality, and Geographic Disparities in Public Health Governance," has been completed and is dedicated to stakeholders, researchers, academics, and observers of health developments.

On behalf of BRIDA, I express my deepest appreciation for the publication of this scientific work, which is a concrete manifestation of our commitment to strengthening the research and innovation ecosystem in the health sector. In the context of the dynamics of the HIV/AIDS epidemic, which remains a global, national, and regional challenge, the availability of up-to-date, evidence-based scientific references is an urgent need.

I hope this book can serve as an academic reference for policymakers, health workers, and related institutions in strengthening efforts to prevent, control, and mitigate the impact of HIV/AIDS. Furthermore, this publication is expected to encourage the development of regional innovation, improve the quality of health services, and strengthen cross-sector collaboration.

To the authors, partner institutions, and all parties who have contributed, I express my deepest appreciation and gratitude. I hope this book can make a significant contribution to our collective efforts to reduce HIV/AIDS transmission and promote research-based, evidence-oriented, and sustainable health development.

Let us unite and work together with enthusiasm and optimism. The best results can be achieved with the cooperation and contribution of all parties. May all our efforts in this event receive the grace and blessings of Allah SWT.

Head of the Regional Research and Innovation Agency of South Kalimantan Province

H. Thaufik Hidayat, S.Sos., M.Si

FOREWORD

Praise be to Allah SWT, for His blessings and mercy. This reference book, "Rethinking HIV AIDS Policy: Human Resources, Social and Economic Inequality, and Geographic Disparities in Public Health Governance," has been completed. This book was written out of academic and practical concern about the stagnation in progress in HIV-AIDS control in Indonesia. Despite progress in access to treatment, Indonesia still faces complex structural challenges. For more than three decades, the response to HIV-AIDS has often been trapped in an overly clinical and reductionist approach, viewing the pandemic solely as a biological infection. However, the reality on the ground shows that treatment failure, persistent stigma, and disparities in access are largely caused by factors beyond the laboratory: non-inclusive policies, unequal distribution of human resources, and invisible but real geographic barriers for those living in peripheral areas.

This book aims to offer a new perspective or a reorientation of the paradigm for viewing public health policy. We can no longer simply talk about the availability of antiretroviral (ARV) drugs without discussing how a farmer in remote Papua or a migrant worker on the coast can access these health facilities without losing their livelihoods. We can no longer simply emphasize prevention education without examining why certain economic structures force key populations into a cycle of vulnerability. Through comprehensive analysis, this book attempts to piece together the pieces of the problem, from the dimensions of human resources, economic inequality, to decentralized governance, which often act as a double-edged sword for our health system. This book also presents the policy realities in several regions in efforts to address HIV-AIDS.

As a writer and academic, I recognize that this manuscript is only a drop in the ocean of public health challenges. However, I hope this book will serve as an important reference for policymakers, health practitioners, community activists, and students studying public health and medical sociology. This book is systematically designed to guide readers to understand that HIV-AIDS is a manifestation of social injustice that must be addressed with equitable policies. The approach used in this book goes beyond problem identification, but also offers a synthesis toward more inclusive, adaptive policies based on Indonesia's geographical realities as an archipelagic nation.

The author would like to express his deepest appreciation to all parties who have contributed, both directly and indirectly, to the preparation of this book. Extensive discussions with colleagues, input from advocates for people living with HIV (PLHIV) in the field, and empirical data from various recent studies have enriched the substance of this book. Finally, I hope this book can stimulate further discussion and make a real contribution to improving the health system in Indonesia, towards achieving the target of HIV elimination by 2030 that is not only statistically successful but also humanitarianly just. I sincerely welcome constructive criticism and suggestions for future improvements.

Banjarmasin, Maret 2026

Author

SINOPSIS

"Rethinking HIV-AIDS Policy: Human Resources, Social and Economic Inequality, and Geographic Disparities in Public Health Governance" is an analytical work that examines the failures and opportunities within Indonesia's HIV response system, as well as case studies of the policy realities in several regions addressing HIV-AIDS. Through a multidisciplinary perspective, this book emphasizes that the HIV pandemic is not simply a medical issue, but rather the result of a complex interaction between limited human resources, profound economic inequality, and significant geographic barriers. The authors highlight how national health policies often fail to accommodate the needs of populations in remote areas and marginalized groups due to urban bias and a one-size-fits-all approach.

The book's primary focus lies on three pillars of systemic barriers. First, the human resource dimension, which suffers from maldistribution and high psychosocial burdens, including the phenomenon of internal stigma in health facilities. Second, socioeconomic barriers that place people living with HIV at risk of catastrophic poverty, where non-medical costs are often a major barrier to treatment adherence. Third, geographical disparities create stratifications in access to services between the central government and the island regions. By presenting up-to-date data and critical analysis of the implementation of health decentralization, this book offers a solution in the form of policy transformation based on geographic equity and the integration of community-based services. This is a must-read for anyone seeking to understand the anatomy of Indonesian public health policy in addressing one of the most persistent health challenges of the modern age.

CHAPTER 1: A NEW PARADIGM IN HIV-AIDS POLICY

1.1 The Urgency of Reorienting National Health Policy

Over the past several decades, responses to the Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) epidemics at both the global and national levels have been dominated by what health sociologists call the "medicalization" of social problems. A strong biomedical approach emphasizes early diagnosis, initiation of antiretroviral (ARV) therapy, and viral load suppression as key indicators of success. HIV-AIDS policies in many countries, including Indonesia, are dominated by biomedical and curative approaches, focusing on case detection (testing), antiretroviral treatment (ART), and transmission control.

This approach, while successful in reducing mortality, has limitations in addressing the structural roots of the HIV-AIDS epidemic. Global institutions such as the World Health Organization emphasize that the HIV epidemic is influenced not only by biological factors but also by social determinants such as poverty, stigma, gender inequality, and access to health services.

However, the epidemiological reality in Indonesia shows that even though access to ARVs has been expanded and made free by the government, the AIDS death rate and the rate of new infections have not shown a drastic decline in line with global targets (Marmot, 2020). This indicates a "missing link" between clinical interventions and the socio-economic realities faced by the community.

Consequently, policies that are too medically oriented often fail to reach vulnerable groups (key populations) such as women and housewives, sex workers, injecting drug users, and other marginalized communities. This indicates a gap between policy approaches and the social realities of the HIV-AIDS epidemic.

Globally, the HIV-AIDS epidemic has undergone a significant shift: from high-risk groups to the general population, from an acute disease to a manageable chronic condition, from a health issue to a social development issue.

A report from the Joint United Nations Programme on HIV/AIDS indicates that the increase in new cases in several developing countries is closely related to gender inequality, population mobility, urbanization, and weak health systems.

In this context, HIV/AIDS policies can no longer be sectoral but must be integrated into broader health systems and development policies.

The urgency to reorient national health policies stems from the realization that failure to achieve the 95-95-95 Fast-Track targets—that is, 95% of people living with HIV know their status, 95% of those who know their status receive treatment, and 95% of those treated achieve viral suppression—is not a problem of drug failure per se. This failure is more often caused by structural factors beyond the control of the health sector itself. For example, someone may know their HIV status, but fear of losing their job due to workplace stigma (economic inequality) or lack of transportation costs to a distant hospital (geographic disparity) prevents them from starting treatment. Therefore, health policies should no longer focus solely on providing medical commodities, but should address the root causes that make individuals systemically vulnerable.

The reorientation of national health policy demands a shift towards a new, more comprehensive and integrative paradigm. This paradigm includes:

a. Social Determinant-Based Approach

HIV-AIDS is understood as the result of a complex interaction between biological and social factors, such as poverty, education, gender inequality, stigma, and discrimination. This approach emphasizes that health interventions must target structural root causes, not just medical symptoms.

b. Human Rights Approach

HIV-AIDS policies must guarantee: access to health services without discrimination, protection for vulnerable groups, and the elimination of stigma and criminalization. This approach aligns with the global principles advocated by the United Nations, which recognize health as a fundamental right of every individual.

c. Health Service Integration

The new paradigm emphasizes the integration of HIV-AIDS into primary health care, reproductive health, and communicable and non-communicable disease programs. This aims to improve health system efficiency and expand service coverage.

d. Community and Participatory Approach

Community involvement is key in prevention, education, and treatment support. This model has proven more effective in reaching vulnerable populations than top-down approaches.

1.1.1 The Failure of the Biomedical-Reductionist Approach

The biomedical-reductionist approach to HIV-AIDS policy refers to a perspective that simplifies the complexity of the HIV epidemic solely into biological and clinical aspects, such as the mechanism of viral infection, diagnosis through HIV testing, treatment with antiretroviral drugs (ART), and medical intervention-based prevention.

This approach is rooted in the classical medical model, which views the disease as an individual's biological disorder, without considering the social, cultural, and structural contexts that influence HIV transmission and management. While this approach has significantly contributed to reducing mortality and increasing life expectancy for people living with HIV, global institutions such as the World Health Organization have emphasized that this approach is insufficient to comprehensively control the epidemic.

The biomedical-reductionist approach tends to view patients merely as viral hosts that must be "cleared" through chemical regimens. In the context of Indonesian policy, this is evident in how the Health Office's budget allocation and key performance indicators (KPIs) rely heavily on the number of people tested and on ART. This approach often neglects the human aspect of the patient. For example, policies that mandate HIV testing for pregnant women or

certain groups without prior quality counseling and guarantees of personal data protection often trigger trauma and social isolation. When health policies are divorced from their social context, they lose their effectiveness because they ignore human agency and environmental barriers (Ministry of Health of the Republic of Indonesia, 2023).

Failures in the Context of Policy Implementation

a. Inability to Reach Vulnerable Populations

The biomedical approach often fails to reach vulnerable groups such as women in unequal relationships, sex workers, injecting drug users, and marginalized communities.

This is because the main barriers are not only access to services, but also stigma, criminalization, and social inequality.

According to the Joint United Nations Programme on HIV/AIDS, stigma and discrimination are the main factors preventing individuals from getting tested for HIV and accessing treatment.

b. Low Treatment Adherence

Even though ART is available, many patients do not achieve optimal adherence due to social pressure, family and community stigma, economic conditions, and limited access to services. The biomedical approach is inadequate to explain and address these factors.

The failure of the reductionist-biomedical approach to HIV-AIDS policy lies in its inability to capture the social and structural complexities underlying the epidemic. While effective clinically, this approach is inadequate to address the social determinants, stigma, and inequality that are the primary drivers of HIV transmission. Therefore, a new paradigm for HIV-AIDS policy demands the integration of biomedical approaches with social, economic, and human rights perspectives. This transformation is key to creating policies that are not only medically effective but also equitable and sustainable in the long term.

c. Failure of Behavior-Based Prevention

Interventions that focus solely on changing individual behavior (e.g., condom use) are often ineffective without considering power relations in sexual relationships, gender-based violence, and cultural norms. This demonstrates that behavior cannot be separated from its social context.

Furthermore, excessive medicalization has led non-health sectors to feel they lack responsibility for HIV prevention. HIV is considered a "health person's business," even though the driving factors for new infections often originate in the education sector (lack of sexual literacy), the workforce sector (discriminatory hiring), and the legal sector (criminalization of key populations). Policy reorientation demands recognition that health results from cross-sectoral development. Without this paradigm shift, national health systems will simply continue to "put out fires" without truly eliminating the source. This transformation requires political courage to shift the focus from short-term clinical outcomes to long-term social well-being.

1.1.2 Shifting Epidemiological and Demographic Burdens

The shift in the epidemiological and demographic burden in the new HIV-AIDS policy paradigm refers to changes in disease distribution patterns, the characteristics of affected populations, and the social determinants that influence the HIV-AIDS epidemic. Scientifically, this concept is rooted in the theories of the epidemiological and demographic transitions, which explain the dynamics of changes in disease and population structure alongside social, economic, and health-technology developments.

In the context of HIV-AIDS, the epidemiological shift reflects a shift from:

- Early phase of the epidemic: dominated by certain high-risk groups (e.g., sex workers, injecting drug users).

- Late phase: expanding to the general population, including women, housewives, and children.

Scientifically, this shift is characterized by a decline in mortality due to antiretroviral therapy (ART), which transforms HIV into a chronic disease. The increase in prevalence occurs due to longer life expectancy and co-morbidity with other diseases, such as tuberculosis or non-communicable diseases. The implication is that the burden of disease shifts from acute mortality to long-term management; health systems must shift from a curative approach to a continuum of care. The new paradigm emphasizes that HIV is not solely a biological phenomenon, but is also influenced by poverty, stigma and discrimination, population mobility, and unequal access to education and healthcare. This approach aligns with the determinants of health framework, which positions social factors as the primary drivers of the epidemic.

Recent data demonstrates a shift in transmission patterns and demographics of people living with HIV (PLHIV) in Indonesia. While two decades ago the epidemic was heavily concentrated among injecting drug users (IDUs), today transmission through high-risk sexual intercourse has become dominant, encompassing a broader population, including housewives and adolescents. This shift demands more flexible and non-judgmental policies. Policy reorientation must respond to these dynamics with more modern prevention strategies, such as the use of Pre-Exposure Prophylaxis (PrEP) and strengthening primary healthcare services that are friendly to adolescents and women (World Health Organization, 2022).

In addition to shifting transmission modes, we also face the challenge of "aging with HIV." Thanks to the effectiveness of ARVs, many people living with HIV now live into old age, carrying a new burden of non-communicable diseases (NCDs) such as diabetes, hypertension, and cardiovascular disease. The current health system remains highly fragmented between HIV services and NCD services. National policy reorientation must lead to comprehensive service integration, eliminating the need for individuals living with HIV to access holistic care. This integration is not only about clinical efficiency but also about respecting the dignity of patients as whole individuals, not simply "infection cases" to be reported monthly.

The shifting epidemiological and demographic burden of HIV/AIDS demonstrates that the epidemic has evolved from an acute disease with high mortality to a complex, chronic condition with widespread socio-demographic distribution.

Therefore, a new paradigm for HIV/AIDS policy must adopt a multidimensional approach that integrates biomedical, social, and structural aspects to achieve sustainable response effectiveness.

1.1.3 Social Determinants and Policy Frameworks

In the new paradigm of HIV/AIDS policy, the concept of social determinants within the policy framework refers to non-biological factors that systemically influence the risk of infection, access to services, treatment success, and quality of life of people living with HIV.

Key Dimensions of Social Determinants in HIV/AIDS Policy

a. Economic Inequality

Poverty contributes to limited access to health services, increased survival practices (e.g., transactional sex), and economic dependency, which increases women's vulnerability. Empirically, low-income groups are at higher risk of delayed diagnosis and antiretroviral therapy failure.

b. Stigma and Discrimination

HIV-related stigma, for example, reduces willingness to get tested, leads to treatment discontinuation, and worsens mental health. Structural discrimination (in health facilities, the workplace, and the law) reinforces social exclusion.

c. Gender Inequality

Gender inequality affects women's ability to negotiate safe sex, exposure to gender-based violence, and access to reproductive health services. This phenomenon has led to the feminization of the HIV epidemic in many developing countries.

• d. Education and Health Literacy

Low education is associated with a lack of knowledge about HIV prevention, poor adherence to therapy, and misinformation about transmission.

This approach is rooted in the determinants of health framework, which positions social, economic, political, and cultural conditions as fundamental factors in the distribution of disease. Incorporating social determinants of health into the national policy framework means recognizing that a person's health is determined by the conditions in which they are born, grow up, work, and age. In the context of HIV in Indonesia, the most dominant social determinants are poverty and education level. Individuals with low economic status are more likely to drop out of treatment (lost to follow-up) not because they don't want to be cured, but because they have to choose between buying food and paying for transportation to the community health center. Responsive health policies must be able to mitigate these economic barriers, for example, through integrated social assistance schemes for patients with chronic illnesses (World Health Organization, 2022).

Another social barrier is the construction of cultural and religious norms, which often clash with public health interventions. Policies that are solely technocratic and do not consider local cultural sensitivities often hit a dead end in implementation. Therefore, policy reorientation requires the involvement of community leaders and religious leaders not merely as objects of socialization, but as partners in formulating contextual prevention strategies. By integrating these social aspects, national health policies will have stronger roots in society, so that the level of acceptance and sustainability of the program can be guaranteed more optimally and humanely.

1.1.4 Towards Gender-Responsive and Inclusive Governance

In the new paradigm of HIV/AIDS policy, the concept of gender-responsive and inclusive governance refers to the transformation of policy and health service systems to accommodate diverse needs based on gender, social identity, and structural vulnerability. This approach places justice, equality, and participation as key principles in HIV/AIDS control.

Conceptually, gender-responsive governance is a policy system that recognizes gender inequality, responds to the specific needs of men, women, and gender minority groups, and integrates a gender perspective throughout the policy cycle (planning, implementation, and evaluation). Meanwhile, inclusivity emphasizes the involvement of all population groups, including key and vulnerable populations, and the elimination of barriers to accessing health services. This approach is closely linked to the frameworks of gender equality and health equity.

Policy reorientation must also pay special attention to the gender dimension. Women living with HIV in Indonesia often face a double burden: they are both victims of infection and family stigma, and often have a weak bargaining position in making decisions about their own reproductive health. Gender-blind policies will only widen the gap in access inequality. Therefore, a policy transformation is needed to ensure that health services are not only physically available but also psychologically safe for women and other vulnerable groups.

This inclusivity also encompasses key population groups that have often been marginalized from accessing health services due to systemic discrimination. Inclusive health policies must guarantee that every citizen, regardless of their social background, sexual orientation, or occupation, has an equal right to access quality health services without fear of persecution. By building a responsive and inclusive governance system, Indonesia will not only be able to reduce HIV prevalence but also lay the foundation for a more resilient and equitable public health system in the future. This change is not an option, but a moral and professional imperative for every element of the nation.

Moving towards gender-responsive and inclusive governance in HIV-AIDS policy is a fundamental strategy for addressing the structural inequalities underlying the epidemic. By integrating a gender perspective, principles of inclusivity, and a human rights-based approach, policies become more adaptive, equitable, and effective in reducing HIV transmission and improving the quality of life for all population groups, especially the most vulnerable and marginalized.

1.2 The Evolution of Policy Responses: From Medical Emergencies to Structural Issues

In the new paradigm of HIV/AIDS policy, the evolution of the policy response from a medical emergency to a structural issue represents a fundamental transformation in how the HIV epidemic is understood and addressed. Scientifically, this shift represents a shift from a solely clinical-biomedical approach to a broader approach encompassing social, political, economic, and cultural determinants.

The HIV/AIDS response policy journey in Indonesia can be divided into several crucial phases that reflect the government's understanding of the dynamics of this pandemic. The first phase, from the late 1980s to the mid-1990s, is known as the denial phase and the initial medical emergency response. The first case, discovered in a foreign tourist in Bali in 1987, triggered a reaction that tended toward panic and discrimination. At that time, HIV was considered a "foreign disease" that only affected certain groups perceived as exhibiting deviant behavior. The policy response at that time was largely limited to surveillance at entry points and in certain health facilities, without a comprehensive national strategy (Ministry of Health of the Republic of Indonesia, 2023).

The second phase occurred with the increasing prevalence among injecting drug users in the early 2000s. The government began to recognize that HIV had become a serious public health threat. This led to the establishment of a stronger National AIDS Commission and the launch of a Harm Reduction program through the provision of sterile syringes and methadone maintenance therapy. This marked a significant turning point, as policies began to address behavioral and social environmental aspects. However, dependence on international donor funding, such as the Global Fund, began to form during this phase, which, while accelerating drug access, also created vulnerabilities to the program's sustainability if donor funding were to be withdrawn.

The third phase, currently underway, is integration into the national health system and decentralization. Since the implementation of the National Health Insurance in 2014, HIV services have been integrated into primary health care facilities. This policy aims to normalize HIV as a chronic disease that can be managed at the primary care level, along with diseases such as diabetes or tuberculosis. However, this transition presents new challenges in terms of human resource readiness in the regions and disparities in service

quality between regions. The "Fast-Track" policy, adopted from global commitments, has become a new compass for the government to accelerate case finding and treatment.

This evolution represents a shift in perspective: from viewing HIV as a narrow moral and clinical issue to recognizing it as a structural issue requiring multisectoral engagement. However, changes at the policy document level are often not aligned with implementation at the grassroots level. In many regions, Regional Regulations (Perda) on HIV/AIDS remain punitive and out of sync with the human rights spirit enshrined in the national strategy. Therefore, understanding the historical evolution of these policies is crucial to identifying recurring bottlenecks and why some structural issues, such as stigma and human resource maldistribution, remain unresolved to this day.

The evolution of the HIV policy response from a medical emergency to a structural issue reflects the maturing scientific understanding that the HIV epidemic cannot be separated from its surrounding social context. This new paradigm demands interventions that not only treat the disease but also transform the social structures that create vulnerability. Therefore, effective HIV/AIDS policies must be integrative, inclusive, and socially justice-oriented to achieve sustainable epidemic control.

1.3 A Critical Analysis of the Current Policy Framework

A new paradigm for HIV/AIDS policy: A critical analysis of the current policy framework is an evaluative effort that assesses the extent to which existing policies can respond to the complexities of the biosocial, dynamic, and multi-layered HIV epidemic. Scientifically, this analysis not only examines program effectiveness but also uncovers structural limitations, paradigm biases, and inequalities in policy implementation.

One of the most fundamental challenges in HIV/AIDS governance in Indonesia is the extremely high dependence on international funding, particularly from the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM). Since the beginning of the epidemic, international aid has been the backbone of financing medical commodities, including the procurement of antiretroviral drugs (ARVs), laboratory test kits, and community support. Theoretically, this dependence creates what is known as the "trap of external dependency" in public health policy. When a country is overly dependent

on donors, program priorities are often driven by global agendas that may not always align with local sociocultural realities.

This dependence is not only financial but also technical and managerial. Reporting systems, intervention standards, and success indicators are often dictated by donor mechanisms. This poses significant risks to program sustainability. In Indonesia, a transition to financial independence has been initiated, but progress remains hampered by limited fiscal space at the regional level and a lack of political commitment to take over prevention funding, which has been dominated by NGO donor partners. Critical analysis shows that without a well-developed exit strategy, the abrupt withdrawal of donor funding could cause a systemic "shock" that threatens the lives of thousands of people living with HIV (PLHIV) who depend on the continued availability of drugs.

A critical analysis of the current HIV-AIDS policy framework reveals a gap between the complexity of the epidemic and the limited policy response. The new paradigm demands a shift toward more holistic, evidence-based policies that are responsive to social determinants and oriented toward equity and inclusivity. Without this transformation, HIV control efforts will not achieve optimal and sustainable impact.

1.3.1 Dependence on International Donors (Global Fund)

In the new paradigm of HIV-AIDS policy, the issue of dependence on international donors, particularly the Global Fund to Fight AIDS, Tuberculosis, and Malaria, has become a critical focus of analysis because it directly relates to the sustainability, policy sovereignty, and effectiveness of HIV response programs. Since the beginning of the HIV epidemic, many developing countries have relied on external funding for drug procurement (including antiretroviral therapy), prevention programs, and health care system strengthening. The Global Fund to Fight AIDS, Tuberculosis, and Malaria is one of the main actors providing performance-based funding for HIV, including integration with diseases like tuberculosis.

This dependence on the Global Fund has created an HIV response structure that parallels the national health system. Despite efforts to integrate, many initiatives continue to operate outside standard government bureaucratic channels to ensure speed and efficiency of fund absorption. Consequently, an internal "brain drain" has occurred, with the best health sector personnel preferring to work on donor projects rather than strengthening the public bureaucratic system. This weakens the long-term institutional capacity of the Indonesian government (Ministry of Health, 2024). Furthermore, donor schemes often favor interventions with quickly measurable quantitative results, such as the number of tests performed. However, they often pay little attention to strengthening basic structures, such as the welfare of health workers or hospital infrastructure in remote areas. Furthermore, structural dependency (Dependency Syndrome) is a long-term dependence that leads to weak domestic financing and low health system independence. From a political economy of health perspective, this creates an asymmetrical relationship between recipient and donor countries. Furthermore, when programs are funded by donors, there is a potential for distorted policy proportions. This is because the programs follow global agendas, rather than local needs, and focus more on quantitative indicators than on the social context. As a result, the social determinants of HIV are under-recognized, and structural interventions receive less attention.

In an ideal policy framework, international aid should function as a catalyst, not a substitute for state responsibility. The challenge ahead is how to systematically shift this financing burden to the State Budget and Regional Budgets without compromising the quality of existing services. Dependence on international donors such as the Global Fund to Fight AIDS, Tuberculosis, and Malaria has played a crucial role in controlling the HIV epidemic. However, in the new paradigm, this dependency must be criticized and transformed. Sustainable HIV-AIDS policies require financial independence, health system integration, and a social determinants-based approach to ensure that the HIV response is not only technically effective but also sovereign, contextual, and equitable.

1.3.2 Program Fragmentation in the National Health Insurance System

Since the implementation of the National Health Insurance by the Social Security Agency for Health, the integration of HIV services into the universal financing scheme has faced serious fragmentation. By regulation, basic healthcare services should be covered by JKN, but in practice, ARV drug procurement still relies on a centralized mechanism within the Ministry of Health (buffer stock). This creates a duality in logistical and administrative channels. People living with HIV often have to navigate bureaucratic complexities: they must be registered as JKN participants to receive check-ups, but the drugs are sourced from a different program (Siregar et al., 2023).

This fragmentation is also evident in the referral system. Community health centers (Puskesmas), as first-level health facilities, often lack the authority or capacity to provide ARV treatment independently (as satellites), requiring patients to be referred to distant hospitals. This not only increases transportation costs for patients but also increases the risk of loss to follow-up. National health policy needs to align the JKN benefit scheme with the HIV program to ensure more holistic and patient-centered care, rather than a division of resources.

1.3.3 Data Accuracy and Fragmented Information Systems

In the new paradigm of HIV/AIDS policy, data accuracy and the fragmentation of information systems are crucial issues because policy quality depends heavily on the accuracy, completeness, and integration of data. Scientifically, this issue relates to weaknesses in health information systems that hinder evidence-based policymaking. Data accuracy refers to the degree to which collected data corresponds to actual conditions on the ground. In contrast, information system fragmentation refers to the condition where data is scattered across various, unintegrated systems. Data accuracy is at the heart of effective policy.

Data Accuracy Issues in HIV/AIDS

a. Underreporting and Hidden Epidemic: Many HIV cases go undetected due to limited access to testing, stigma and discrimination, and hidden populations. This results in biased prevalence estimates and inaccurate policy targeting.

b. Disaggregated Data. This is due to a lack of data by gender, age, geographic region, and risk group, hampering disparity analysis and specific responses.

c. Low Data Quality. Problems include duplication of patient data, recording errors, and late reporting. This impacts the validity of program indicators such as antiretroviral therapy coverage.

In Indonesia, the HIV information system (SIHA) has undergone several updates, but data fragmentation remains persistent. There is still a gap between data reported by health facilities and the actual number of people living with HIV (PLHIV) in the field. The problem of "double counting," or patients not being reported when changing health facilities, is a major obstacle in calculating treatment success rates. Without real-time, integrated data, policies are often reactive and poorly targeted. A critical analysis of current information systems shows that the digital administrative burden is often too heavy for healthcare workers in the field. A health center officer must complete numerous forms, both manual and digital, which takes up time needed to provide quality counseling services. Digitization should simplify matters, not create additional burdens. Therefore, a simplified information system integrated with population data (NIK) and national electronic medical records is needed to enable treatment monitoring across regions without bureaucratic hurdles.

1.3.4 The Gap Between Central Policy and Regional Implementation

The evolution of health policy responses from a medical emergency approach to recognizing it as a structural issue reflects a paradigm shift in understanding the determinants of health. This transformation is not only conceptual but also directly impacts the gap between central policy and regional implementation, particularly in the context of decentralized countries.

Under a decentralized framework, HIV policy implementation is highly dependent on the commitment of regional heads. Although the central government has established Minimum Service Standards related to HIV, many regions have not prioritized this issue in their regional medium-term development plans. Health budgets

at the district/city level are often allocated more to the physical construction of community health centers than to outreach activities for vulnerable groups or support for communities living with HIV.

This gap creates a "postcode lottery" phenomenon where the quality of HIV services a person receives depends heavily on their region of residence. Regions with strong fiscal capacity and strong political commitment may have excellent services, while poorer regions with high caseloads are often neglected. This calls for stricter monitoring mechanisms and incentives from the central government to ensure that each region adheres to national HIV response targets. Policies should not remain on paper in Jakarta; they must be translated into concrete action across the country.

Issues of data accuracy and fragmented information systems in HIV-AIDS policies reflect structural weaknesses in the health system and data governance. In the new paradigm, transformation toward an integrated, accurate, and socially determinant-based information system is a key prerequisite for producing effective, adaptive, and equitable policies. Without fundamental improvements to data systems, HIV control efforts will continue to face limitations in achieving optimal and sustainable impact.

The evolution of health policy responses demonstrates a shift from a reactive emergency medical approach to a systemic and preventive structural approach. However, this transformation faces serious implementation challenges, particularly related to the gap between central policy and regional capacity. Scientifically, the success of modern health policies is largely determined by the system's ability to integrate structural approaches with adaptive, contextual governance based on strengthening local capacity.

CHAPTER 2: HUMAN RESOURCE DIMENSIONS IN COMBATING HIV-AIDS

2.1 Capacity and Competence of Frontline Health Workers

Human resources (HR) in health are a key pillar that determines the success or failure of a health system. In the context of HIV/AIDS prevention, the role of frontline health workers—especially in community health centers (Puskesmas) and regional general hospitals—is crucial. They not only serve as providers of clinical medical services, but also as counselors, educators, and frontliners in combating stigma. However, the reality on the ground shows that there is a significant capacity gap between expected standards and the actual competencies of these workers (Sukmaningrum et al., 2024).

HR capacity encompasses not only technical knowledge about the virus and drug regimens but also cultural competence and empathetic communication skills. A nurse or doctor in a remote area often has to handle a wide variety of general health cases, limiting their time and energy to delve into the specifics of HIV management. The low frequency of ongoing training exacerbates this situation. National health human resource development policies have tended to be sporadic and often only targeted health workers in urban centers, leaving workers in peripheral areas in the dark about the latest medical information.

2.1.1 VCT/PITC Clinical and Counseling Skills Gap

In the new HIV/AIDS policy paradigm, the capacity and competence of frontline health workers are key determinants of program success, particularly in diagnostic and counseling services such as Voluntary Counseling and Testing (VCT) and Provider-Initiated Testing and Counseling (PITC). Health worker capacity encompasses the number and distribution of personnel, the availability of training, and resources. Competence refers to clinical knowledge, technical skills, communication,

and counseling abilities. In the HIV context, these competencies are crucial for early detection, initiation of antiretroviral therapy, and patient retention in care.

This VCT/PITC Clinical and Counseling Skills Gap leads to low HIV testing coverage, delayed diagnosis, poor treatment retention, and failure to achieve global targets (95-95-95). Overall, this undermines the effectiveness of continuum-of-care interventions.

Scientifically, the clinical and counseling skills gap reflects systemic challenges in service quality, which directly impact the HIV care cascade. Voluntary Counseling and Testing (VCT) and Provider-Initiated Testing and Counseling (PITC) services require specialized expertise that combines medical precision with psychosocial sensitivity. Many healthcare workers are skilled at performing procedures like blood draws or prescribing prescriptions, but struggle to communicate positive test results to patients. This gap has systemic consequences: poor communication of results can trigger depression in patients, which in turn leads to refusal of treatment.

Data shows that many healthcare workers still use a moralizing rather than empowering approach when providing counseling. This often stems from a medical education background that focuses heavily on biological pathology without adequate training in behavioral science and medical sociology. Healthcare worker education curricula need to be reformed to incorporate crisis communication and trauma management, especially for diseases with a high stigma burden like HIV/AIDS. Without improving the quality of interactions between healthcare workers and patients, the target of detecting new cases will remain a dry number without sustainable therapy.

The capacity and competence of frontline healthcare workers are key pillars of successful HIV/AIDS policy. The gap in clinical skills and VCT/PITC counseling reflects a systemic challenge that must be addressed through a holistic, sustainable, and patient-centered approach. In the new paradigm, strengthening health workers focuses not only on technical aspects but also on social sensitivity and communication skills, thereby improving service quality, expanding access, and ensuring sustainable HIV control success.

2.1.2 Technical Readiness of Laboratories and Pharmacies at the Basic Level

In the new HIV/AIDS policy paradigm, the technical readiness of laboratories and pharmaceuticals at the primary level is a crucial component in strengthening the capacity and competence of frontline healthcare workers. Scientifically, this readiness determines the quality of diagnosis, the continuity of therapy, and the effectiveness of the overall HIV service system, particularly in supporting the continuum of care. Technical readiness refers to the ability of primary health facilities (community health centers, primary care clinics) to provide accurate and timely laboratory services and manage a pharmaceutical system that ensures the availability and quality of drugs. This component includes infrastructure, human resources, logistics systems, and standard operating procedures (SOPs). This limited technical readiness impacts HIV/AIDS treatment programs, leading to delayed diagnoses, disrupted therapy continuity, increased risk of drug resistance, and low patient retention. Systemically, this hampers the achievement of HIV elimination targets.

The new paradigm emphasizes:

a. Strengthening Primary Care by decentralizing HIV services to the primary level and increasing the technical capacity of primary care facilities.

b. System Integration, namely the integration of laboratories and pharmaceuticals within the national health system, as well as data and logistics interoperability.

c. A Systems-Based Approach refers to health systems strengthening and simultaneously strengthening all components of the health system.

In addition to doctors and nurses, laboratory and pharmacy personnel at Community Health Centers (Puskesmas) play a vital role in supply chain management

and clinical monitoring. The competence of laboratory personnel in performing accurate diagnostic tests and managing specimens for Viral Load (VL) testing still varies widely. In many regions, delays in sending samples from Community Health Centers to reference laboratories equipped with PCR (Polymerase Chain Reaction) machines are often caused by staff's lack of knowledge regarding proper medical logistics procedures (Ministry of Health of the Republic of Indonesia, 2024).

On the pharmaceutical side, pharmacists in primary care often lack sufficient knowledge regarding ARV drug interactions with other medications or the management of short-term side effects often experienced by new patients. Pharmacists' inability to provide reassuring explanations about ARV side effects is often a major reason for patients to discontinue taking their medications within the first month. Therefore, human resource capacity building must be carried out holistically, encompassing all healthcare professionals involved in the HIV service ecosystem, not just specialist doctors in large hospitals. Laboratory and pharmaceutical technical readiness at the primary level is a key foundation for effective HIV-AIDS services. Limitations in this area reflect systemic challenges in primary healthcare capacity. In the new paradigm, strengthening infrastructure, human resource competency, and system integration are key to ensuring accurate diagnoses, ongoing therapy, and comprehensive and sustainable improvements in the quality of life of people living with HIV.

2.1.3 The Role of Primary Care Physicians in Chronic Case Management

The capacity and competence of frontline healthcare workers, particularly primary care physicians, are the foundation for chronic case management (both non-communicable diseases and long-term conditions such as HIV). Scientifically and theoretically, this role can be understood through the integration of the health systems perspective, clinical competency theory, and the chronic disease management model. The capacity and competence of frontline healthcare workers, particularly primary care physicians, are key determinants of the successful management of chronic diseases (such as diabetes, hypertension, and cardiovascular disease). Scientifically, this role can be analyzed through three main dimensions: system capacity, clinical competency, and coordinating function within the health system. As the HIV paradigm shifts from a fatal

disease to a manageable chronic illness, the role of Primary Care Physicians (PFCs), or general practitioners (GPs) at Community Health Centers (Puskesmas), becomes crucial. They are expected to be capable of long-term case management, including monitoring comorbidities. However, the extremely high workload of Puskesmas physicians—often serving hundreds of patients daily—makes it difficult for them to provide the personalized attention HIV patients require.

From the World Health Organization's perspective, primary care is the primary point of entry (first contact care) characterized by high accessibility, continuity of care, cross-service coordination, and a comprehensive, patient-centered approach. Primary care physicians serve as gatekeepers and care coordinators, determining the care pathway for chronic patients within the health system.

Another issue is the lack of clinical confidence among general practitioners (GPs) to initiate ARV therapy independently. Although regulations allow certain community health centers (Puskesmas) to provide Treatment Support Care (PDP), many physicians remain hesitant and prefer to refer patients to specialists in hospitals. This results in a backlog of patients at the secondary level and creates barriers to access. Capacity-building policies must ensure legal protection and regular technical guidance through mentorship systems or telemedicine from specialist physicians to primary care physicians in the field.

The capacity and competence of primary care physicians are key pillars in chronic disease management. Scientifically, the effectiveness of this role is determined by the physician's ability to provide comprehensive, sustainable, integrated, and patient-centered care. Strengthening system capacity and improving clinical competency impact not only individual health outcomes but also the efficiency and sustainability of the health system as a whole.

Theoretically, the capacity and competency of primary care physicians are key determinants of successful chronic case management. Through the integration of the health system framework, clinical competency model, and chronic care approach, primary care physicians play a role not only as providers of medical services but also

as coordinators, educators, and facilitators of patient behavior change. Therefore, strengthening capacity and competency at the front line is a key strategy for improving service quality and health system sustainability.

2.1.4 Challenges of Certification and Retention of Trained Personnel

The evolution of health policy responses from a medical emergency approach to recognition as a structural issue is also clearly reflected in the management of trained health workers, particularly regarding certification and retention. From a scientific perspective, this transformation demonstrates a shift from a short-term focus based on crisis response to a systemic approach that emphasizes health workforce sustainability.

A classic problem in health human resource management in Indonesia is the high rate of staff turnover. Staff who have received intensive HIV training are often transferred to other departments or regions before they have a chance to optimally apply their knowledge. This results in wasted resources and disrupts the continuity of services at health facilities. The lack of an adequate incentive system for staff working in HIV services—which carry high risks of occupational exposure and psychological burden—makes these positions less attractive.

Over time, policies have begun to shift toward strengthening the quality of health workers through a competency-based certification system. This aligns with the World Health Organization's framework for strengthening health workers, which emphasizes national and global competency standards, continuous professional development (CPD), recertification based on periodic evaluations, and accreditation of educational and training institutions.

However, in practice, structural challenges arise, such as disparities in access to training between regions, limited quality training institutions, high certification costs, and complex bureaucracy.

Within the Health Systems Strengthening framework, health workers are one of the main building blocks of the health system. Therefore:

- Certification must be integrated with the continuing education and training system,

- Retention must be supported by cross-sectoral policies (economy, education, infrastructure),

- Personnel distribution must be based on population needs (needs-based distribution).

The national strategy should consider establishing an HIV Task Force at the regional level or providing specialized certification that provides professional credit points for health workers who focus on this area. Retention of trained personnel must be a priority to ensure that investments in training are not wasted. Furthermore, policies are needed that enable skilled non-medical personnel (such as community health workers) to take on specific roles within the health system through task-shifting schemes, reducing the workload of purely medical personnel and ensuring patients receive more comprehensive social support.

The evolution of the policy response from a medical emergency to a structural issue demonstrates that the challenges of health worker certification and retention cannot be addressed through purely technical approaches. Scientifically, this problem reflects imbalances in the broader health system. Therefore, solutions require a systemic approach that integrates competency standards, access to training, incentives, and working conditions that support the sustainability of healthcare workers, especially those on the front lines.

2.2 Motivation and Psychosocial Challenges of Companion Officers

The success of a health policy is determined not only by the availability of logistics, but also by the intrinsic motivation of its drivers. In HIV-AIDS response programs, support workers—whether health professionals or community volunteers—play a role that goes beyond medical administrative duties. They serve as a bridge of trust between a rigid health system and a population that often feels alienated. The motivation of support workers in Indonesia often stems from altruistic values, humanity, and a sense of professional calling. However, this motivation is constantly tested by significant psychosocial challenges, including the social risks they face as a consequence of their interactions with marginalized groups (Putri et al., 2022).

Psychosocially, support workers often experience what is known as "secondary stigma" or "stigma by association." The social environment, and even their own colleagues, sometimes look down on those who focus on HIV services, associating them with behaviors considered deviant by dominant norms. This creates a double burden: providers must maintain the mental health of patients while simultaneously protecting themselves from environmental prejudice. These challenges are often not compensated by adequate policy support, so that initially high motivation can slowly erode into functional apathy.

To understand this dynamic, we can refer to Self-Determination Theory (SDT), which emphasizes the importance of autonomy, competence, and relatedness. HIV support workers need autonomy to make tactical decisions in the field, competence through ongoing training, and a sense of connection to a larger support system. In Indonesia, this connection is often fragile. Many workers feel they are working "alone" amid policies that are highly oriented toward quantitative targets, neglecting the qualitative process of providing support that drains emotional energy.

Another psychosocial challenge is compassion fatigue. Workers are often exposed to stories of trauma, violence, and despair experienced by people living with HIV. Without regular debriefing or counseling mechanisms for workers, constant exposure to others' trauma can lead to profound mental exhaustion. Reorienting health human resource

policies must incorporate the mental health of workers as an integral part of national programs. If the support workers are vulnerable, the patient protection system will also be weakened. Therefore, motivation must be nurtured through professional recognition and structured emotional support.

2.2.1 The Phenomenon of Internal Stigma in the Medical Environment

The motivations and psychosocial challenges of support staff (e.g., counselors, case managers, or caregivers of chronic/HIV patients) cannot be separated from the dynamics of internal stigma in the medical environment. Scientifically, this phenomenon lies at the intersection of health psychology, medical sociology, and organizational behavior.

Stigma is the most persistent barrier to HIV prevention, but ironically, it arises from within the health system itself. Internalized stigma refers to the process by which individuals, both patients and healthcare professionals, internalize negative stereotypes that develop within the social system. In the context of healthcare professionals, this stigma can manifest as negative beliefs about certain patient groups (e.g., HIV, TB, mental disorders), moral judgment, and emotional distance from care. This phenomenon is rooted in Stigma Theory, which explains that stigma is formed through labeling, stereotyping, separation (us vs. them), and discrimination.

Internalized stigma in the medical environment refers to negative attitudes, prejudice, and discrimination perpetrated by healthcare professionals toward HIV patients or key population groups. The phenomenon of stigma in HIV/AIDS services can manifest itself in judgmental attitudes toward at-risk groups (e.g., sex workers, men who engage in sexual intercourse (MSM), and injecting drug users), covert discriminatory treatment (delayed services, lack of empathetic communication), and moral assumptions about patients. This aligns with Stigma Theory, where people living with HIV are labeled and positioned as a "different group," even within the healthcare system.

This phenomenon is systemic and often unconscious (unconscious bias). The roots of this stigma typically stem from a combination of a lack of up-to-date clinical knowledge, the influence of traditional, judgmental moral values, and an irrational fear of contracting the virus in everyday medical interactions (Nyblade et al., 2019).

Although healthcare workers are formally sworn to provide non-discriminatory services, the reality on the ground demonstrates subtle yet hurtful "differential treatment" for patients. This internal stigma manifests itself in various forms, from excessive use of personal protective equipment (PPE) when treating people living with HIV compared to other patients to delaying medical treatment for trumped-up administrative reasons. This creates an unsafe environment for patients, which in turn encourages them to hide their status or even stop seeking treatment altogether. A critical analysis of this phenomenon suggests that medical education alone is not enough; cultural interventions within healthcare institutions are needed.

Internal stigma is also closely linked to power structures within healthcare facilities. Healthcare workers often feel they have the moral authority to judge patients' lifestyles. Patients from key population groups, such as sex workers or people of minority sexual orientations, frequently experience lecturing or demeaning comments from registration staff, nurses, and doctors. These discriminatory experiences are imprinted in the community's collective memory, creating a "wall of mistrust" toward the health center or hospital.

The impact of this stigma is devastating for Test and Treat programs. When at-risk individuals perceive they will be judged during testing, they may choose to remain unaware of their status. Similarly, for those already receiving treatment, a single experience of discrimination at a healthcare facility can trigger a decision to default (discontinue treatment). National health policies have tended to focus on technical medical training, but have been largely lacking in human rights and diversity sensitivity training for all hospital staff, including non-medical staff such as security and administrative staff, who are the first point of contact with patients.

Beyond its impact on patients, internal stigma also creates fragmentation among healthcare professionals. Staff working in HIV clinics are often viewed as "less prestigious" or even shunned by their colleagues in other clinics. This exacerbates the professional isolation of those dedicated to this field. In some regional hospitals, cases have been found where medical equipment used for HIV patients must be segregated or specially marked, which is medically unnecessary if universal precautions are properly implemented (Sukmaningrum et al., 2024).

This phenomenon indicates that knowledge about HIV transmission routes has not been fully internalized into professional behavior. There remains a gap between "knowing" that HIV is not transmitted through casual social contact and "feeling" safe when interacting with people living with HIV. Therefore, de-stigma strategies must target the affective level of healthcare workers, not just the cognitive level. Patient-friendly hospital policies should establish strict ethical standards and complaint mechanisms for patients experiencing discriminatory behavior, along with strict administrative sanctions for violators.

Efforts to mitigate internal stigma require a systemic approach involving institutional leadership. Hospital or community health center (Puskesmas) directors must be role models in demonstrating inclusive attitudes. In some best-practice countries, "Stigma-Free Healthcare" programs involve people living with HIV (PLHIV) speaking directly to healthcare workers, sharing their experiences of how stigma destroys their life expectancy. This "direct contact" approach has proven more effective in changing healthcare workers' attitudes than simply one-way lectures or reading technical guidelines.

Furthermore, improvements in the work environment are needed. If healthcare workers feel protected by the system (for example, by the availability of readily accessible Post-Exposure Prophylaxis or PEP in the event of a work-related accident), their irrational fears will diminish. Policies that guarantee job security will contribute to a decrease in discriminatory protective behaviors toward patients. Therefore, policy reorientation must recognize that stigma elimination is not only for the sake of patients' human rights, but also for the professionalism and integrity of the national healthcare system itself.

In the context of VCT/PITC, the motivation and psychosocial well-being of healthcare workers are significantly influenced by internal stigma within the medical environment. Theoretically and empirically, this stigma not only weakens the therapeutic relationship but also disrupts the success of the HIV/AIDS continuum of care. Therefore, interventions must be multi-level—combining individual competency strengthening, organizational support, and systems reform—to create more empathetic, inclusive, and effective HIV services.

2.2.2 Burnout and Systemic Support for Health Human Resources

The motivation and psychosocial challenges of support staff (counselors, case managers, and caregivers of chronic/HIV patients) are key issues in the sustainability of healthcare services. Two central, interrelated aspects are burnout and systemic support for healthcare human resources. Scientifically and theoretically, this phenomenon can be explained through the integration of theories of motivation, work stress, and health system strengthening. Burnout, or work exhaustion, is a latent threat that can cripple the effectiveness of the HIV response in Indonesia. According to the World Health Organization (WHO) definition, burnout is a work phenomenon caused by poorly managed chronic workplace stress. For healthcare workers treating HIV, burnout is described within the Maslach Burnout Inventory framework, with three main dimensions:

- Emotional Exhaustion (emotional exhaustion due to intense interactions with patients, feelings of "emptiness" and loss of energy);

- Depersonalization (cynicism or detachment from patients, reduced empathy in care);

- Reduced Personal Accomplishment (feelings of ineffectiveness or meaninglessness, decreased job satisfaction).

In support staff, burnout is often triggered by high emotional labor. Burnout rates among nurses and HIV counselors in Indonesia are reportedly quite high, especially in large cities with dense caseloads (Maslach & Leiter, 2021).

The primary cause of burnout in this context is the emotional workload disproportionate to the support received. Healthcare workers often face ethical dilemmas, witness the deaths of patients they consider family, and face systemic

pressure to meet statistical targets. When healthcare workers experience burnout, the quality of care decreases dramatically. They become less empathetic, frequently commit medical errors, and are more likely to resign. The absence of systemic support leaves them feeling "burned out" by a system that doesn't care about their well-being.

An analysis of current HR policies reveals the absence of mental health protection mechanisms for healthcare workers. Within our healthcare bureaucratic structure, healthcare workers are considered "tools" for the production of services, and are expected to consistently deliver excellent service. Very few community health centers or hospitals have peer support programs or regular counseling sessions for their staff. Furthermore, existing incentive systems are often based solely on administrative performance, rather than the quality of human interactions. This creates inequities for staff who dedicate extra time to assist patients in crisis.

The systemic support needed extends beyond financial support to improving the work environment. This includes equitable workload distribution, adequate availability of work-supporting tools, and open lines of communication with management. At the national policy level, there needs to be recognition that working in the HIV-AIDS field carries a unique emotional burden that needs to be accommodated through regulations regarding working hours or additional leave for mental health recovery (mental health days). Without these interventions, we will continue to lose our best workers to preventable burnout.

Integrating mental health support into health human resource policies will have a long-term impact on the stability of HIV programs. Mentally healthy healthcare workers are better able to provide quality care and have greater resilience in facing challenges in the field. This policy will also increase staff retention rates, thus maintaining the accumulation of experience and knowledge within a healthcare facility. Continuing education should also address stress management and coping strategies so that each individual has their own "mental first aid kit."

In addition to internal support, collaboration with professional organizations and health associations is crucial for establishing standards for the well-being of healthcare

workers. Regular audits of healthcare worker stress levels are essential as an indicator of organizational health. In responsive public health governance, the well-being of service providers is an absolute prerequisite for the well-being of service recipients. Therefore, this chapter emphasizes that investing in human resources is not merely about technical skills training, but also about nurturing the humanity of the staff themselves, ensuring they continue to illuminate the path for people living with HIV amidst the darkness of stigma.

2.3 Human Resource Distribution: Inequality Between Central and Remote Areas

Another fundamental issue in the human resources dimension is the maldistribution of trained healthcare workers in HIV services. Indonesia faces a "human resources paradox": large cities experience a concentration of medical personnel, while in remote, border, and island areas (DTPK), a single healthcare worker often has to juggle multiple roles. This imbalance creates a stark disparity in the quality of care. A patient in Jakarta might have easy access to an infection consultant, but a patient in a remote part of Maluku or Papua might only see a contract nurse who has not received formal ARV training.

This unequal distribution is not only about numbers but also about qualifications. Most training, funded by donors or the central government, tends to be conducted in provincial capitals, leaving staff at the sub-district level often out of touch with the latest information. Healthcare worker placement policies such as Nusantara Sehat are a good first step, but often the placement period is too short, preventing sustainable knowledge transfer within the region. This uneven distribution of human resources is a manifestation of geographic inequity, which will be discussed in more depth in the next chapter, but its roots lie in the centralized recruitment and career management system.

2.3.1 Maldistribution of Internal Medicine Specialists and Infection Consultants

The unequal distribution of human resources for health in Indonesia is not simply a matter of numbers, but rather a manifestation of structural injustices rooted in

the medical education and recruitment system. The focus of HIV response at the clinical level relies heavily on the presence of internal medicine specialists, particularly those specializing in tropical and infectious diseases (T&I). Data shows that over 60% of these specialists are concentrated on Java, particularly in major cities like Jakarta, Surabaya, and Bandung. This situation creates so-called "medical deserts" in Eastern Indonesia and other island regions, where access to expert consultation is a luxury that is difficult to afford (Ministry of Health of the Republic of Indonesia, 2024).

This maldistribution directly impacts the quality of management of complex HIV cases, such as TB-HIV coinfection or failure of first-line therapy requiring transition to second-line regimens. In areas with specialist shortages, general practitioners at community health centers are often faced with clinical responsibilities beyond their training capacity without adequate supervision. Systemically, this increases the risk of misdiagnosis or delayed treatment of complications. Current national policies, while attempting to incentivize placement in remote areas, have not been able to counteract the economic appeal and career development opportunities offered by urban centers. Therefore, more radical policy reforms are needed, such as mandatory specialist employment integrated with a competitive legal and welfare system in peripheral areas.

This inequality is also exacerbated by the centralization of training centers. Most fellowship programs or intensive HIV training are held at national referral hospitals in Java. This creates logistical and financial barriers for healthcare workers from the regions to improve their competencies. Policy analysis shows that the "cascading" training model currently relied upon often suffers from a decline in the quality of information when it reaches the grassroots level. Workers in remote areas often receive information that is outdated or inconsistent with the availability of facilities in their respective locations.

To address this maldistribution, the government needs to adopt telemedicine technology more widely, not only for patient consultations but also for clinical mentoring between experts at the center and practitioners in the regions. The "Project ECHO" model, which has been successful in several developing countries, can be adapted in Indonesia to create virtual communities of practice connecting internal

medicine specialists in Jakarta with community health center doctors in Papua or Maluku. This way, even though the experts are not physically present, knowledge transfer and clinical decision-making support can still occur in real time. This digital transformation must be an integral part of the national health human resource strategy to bridge existing geographic disparities.

2.3.2 Task-Shifting and Task-Sharing Strategies in Community Health Centers

Facing a shortage of professional medical personnel in remote areas, task-shifting and task-sharing strategies have emerged as pragmatic solutions supported by the World Health Organization (WHO). In Indonesia, this practice has been implemented informally, but regulatory recognition remains very limited. Task-shifting in HIV care involves delegating certain tasks, such as ARV initiation in uncomplicated cases, from specialists to general practitioners, or from doctors to specially trained nurses and midwives. This strategy has been shown to significantly increase treatment coverage in areas with a shortage of doctors (Bucher et al., 2023).

However, the implementation of task-shifting in Indonesia faces significant challenges in terms of legality and professional protection. Many nurses in remote areas perform de facto physician functions in HIV management, yet they are legally vulnerable because such actions are considered beyond their clinical authority under the Nursing Law. National health policy needs to provide a clear legal framework through a Ministerial Regulation of Health governing special assignments during public health emergencies or in Remote, Border, and Island Areas (DTPK). Without legal protection, healthcare workers will hesitate to take initiatives that are truly needed by patients.

Beyond medical aspects, task-sharing also involves the important role of non-medical personnel, such as peer educators and community field workers. They can play a role in supporting medication adherence, tracking patients who miss treatment, and providing basic education. Integrating community workers into the formal health system at community health centers (Puskesmas) can reduce the administrative burden

on medical personnel, allowing doctors and nurses to focus more on clinical aspects that require high expertise. This collaborative model creates a more humane service ecosystem that is closer to the realities of patients' lives.

The effectiveness of task-sharing depends heavily on the quality of training and ongoing supervision. Tasks should not be delegated and then abandoned; quality control mechanisms must be in place to ensure that service standards are maintained. In several pilot areas in Indonesia, the use of simple clinical checklists has helped nurses conduct accurate HIV screening. This capacity building must be accompanied by a fair incentive system, where healthcare workers who take on additional responsibilities are compensated or recognized in their professional credit points. This way, task-shifting is not seen as an additional burden, but rather as a form of professional development amidst limitations.

CHAPTER 3: SOCIAL AND ECONOMIC INEQUALITY AS BARRIERS

3.1 Determination of Economic Status on Access to Health Services

In global public health discourse, HIV-AIDS is often referred to as a "disease of poverty," not because the virus biologically prefers poor hosts, but because the structure of poverty creates conditions that facilitate transmission and hinder access to treatment. In Indonesia, economic status determines access to healthcare services, despite the government's provision of free ARVs. Economic inequality creates a gap between "availability of services" and "ability to access services." For low-income communities, every medical decision interacts with daily survival calculations (Siregar et al., 2022).

Economic status influences access through various channels. The direct channel involves non-medical costs such as transportation to a healthcare facility, food costs during the journey, and the opportunity cost of waiting in line at the hospital. For a daily laborer, leaving work for a day to pick up ARV medication means a significant loss of

wages for his or her family. The indirect channel involves nutritional factors and housing conditions. People living with HIV from low-income families often fail to achieve viral suppression due to inadequate nutritional intake, a prerequisite for effective ARV drug metabolism in the body.

Analysis of Indonesian macroeconomic data shows that areas with high poverty rates tend to have lower HIV treatment coverage rates. This is exacerbated by low health literacy, which is often correlated with education and economic levels. Individuals with low economic status tend to undergo routine health check-ups less frequently and only visit health facilities when symptoms have reached an advanced stage. This phenomenon creates a double burden on the national health system: the cost of treating advanced cases is much higher and has a lower success rate than early treatment.

Therefore, public health policy should not stop at drug subsidies. Policy reorientation must include HIV-sensitive social protection schemes. For example, integrating data on people living with HIV from poor families into social assistance programs such as the Family Hope Program or providing special transportation subsidies for chronically ill patients in remote areas. Without interventions on the economic dimension, the goal of HIV elimination will remain a pipe dream for those with financial means, while the poor will continue to be trapped in a deadly cycle of infection and poverty. This chapter will dissect in more depth how these economic mechanisms work to hinder health equity in Indonesia.

3.1.1 Poverty as a Predictor of Delayed Diagnosis

Delayed diagnosis, or the late presentation phenomenon (patients who are diagnosed only when their CD4 cell count is already very low or opportunistic infections have already appeared), is a serious problem in HIV management in Indonesia. Poverty is the strongest predictor of this phenomenon. Many people living with HIV from the lower middle class delay HIV testing not because they are unaware of their risk, but because they fear the economic consequences of a positive result. In our society, an HIV diagnosis is often accompanied by stigma, leading to dismissal

from jobs or exclusion from community economic support networks. For those living in poverty, this economic uncertainty is far more frightening than the virus itself.

Empirically, studies show that individuals in the lowest economic quintile are 2.5 times more likely to present with clinical stage 3 or 4 disease than those in the highest quintile (Siregar et al., 2022). This delay has systemic impacts: patients require prolonged hospitalization, use expensive medications for opportunistic infections, and often result in permanent disability or death. Structural poverty also limits individuals' ability to access information about self-testing services or community outreach services that may be more welcoming and private.

Furthermore, poverty impacts individuals' agency in negotiating their health. In the context of sex workers or migrant workers forced to work in high-risk environments for economic reasons, their vulnerability to HIV is a result of constrained economic choices. National health policies that only provide behavioral education without providing economic empowerment alternatives will always fail. HIV prevention must be seen as part of a poverty alleviation strategy. If basic needs like food and shelter are not met, long-term health issues like HIV will always be placed last in society's priorities.

Policy reorientation should encourage more proactive HIV testing services closer to pockets of poverty through mobile clinics integrated with other basic health services. By eliminating barriers of distance and transportation costs through outreach services, we can break the chain of delayed diagnosis. Furthermore, a national campaign is needed that emphasizes the ability of people living with HIV to work and be productive, to reduce the fear of losing their livelihoods. Legal protection against workplace discrimination is an often overlooked economic component of HIV policy, but it is crucial for encouraging people to get tested early.

3.1.2 Correlation of Human Development Index (HDI) with Prevalence

The Human Development Index (HDI), which encompasses health (life expectancy), education (average years of schooling), and a decent standard of living

(per capita expenditure), is significantly correlated with patterns of HIV transmission and governance in Indonesia. Provinces with a low HDI, such as Papua and several regions in Nusa Tenggara, consistently demonstrate greater challenges in HIV control compared to provinces with a high HDI, such as Jakarta or Yogyakarta. The HDI reflects not only prosperity but also a region's systemic capacity to respond to health crises (BPS, 2024).

Regions with a low HDI typically face a triple burden: high HIV prevalence, limited availability of health workers, and poor transportation infrastructure. In these regions, the low average education level of the population hinders the dissemination of information on prevention and treatment. Myths and misinformation about HIV are much more easily spread in communities with low literacy, further reinforcing stigma and discrimination. Therefore, public health policies in regions with a low HDI must be implemented with a more fundamental approach, involving strengthening community educational capacity in parallel with medical services.

Further analysis shows that increases in the HDI in a region tend to be accompanied by decreases in AIDS deaths, although prevalence rates may remain high due to improved detection. This suggests that human development generally provides a cushion for individuals living with HIV. With better education, individuals are better able to understand treatment instructions; with a decent standard of living, they can afford nutritious food to support therapy. Thus, investment in human development (HDI) is a long-term investment in the HIV response. Responsive health policies must be able to tailor their intervention strategies based on the HDI profile of each region, so that no region is left behind in achieving the 2030 elimination target.

3.2 Social Marginalization and Vulnerability of Key Populations

Social marginalization in the context of HIV-AIDS in Indonesia is not merely a peripheral phenomenon, but rather central to the systemic failure of epidemic control. Key populations—including men who have sex with men (MSM), female sex workers (FSW), injecting drug users (IDUs), and transgender people—are pushed to the social periphery by state, religious, and societal institutions. Their vulnerability is not only biological due to risky behavior, but also structural, arising from the lack of legal protection and social recognition. Health policies that ignore this marginalization process will consistently face obstacles in achieving the "95-95-95" target, as the groups most in need of services are also the ones most afraid to access them (Ministry of Health of the Republic of Indonesia, 2024).

This marginalization process creates what has been called a "dark space" in public policy. When the state adopts a punitive or moralistic approach to certain behaviors, key populations tend to move underground, complicating outreach and case mapping efforts. In medical sociology, this marginalization is seen as a form of structural violence that systematically deprives individuals of their right to health. Key populations often face multiple barriers: they are discriminated against because of their social identity, and then experience additional stigma when diagnosed with HIV. This multifaceted vulnerability demands policies that are not merely medically technical but also socially and legally transformative to restore their dignity and agency as citizens.

3.2.1 Social Construction of Stigma and Discrimination

Stigma is not an attribute inherently attached to a person, but rather a social construct created through labeling, separation, and discrimination. To understand the anatomy of stigma in HIV policy in Indonesia, we must refer to Erving Goffman's classic theory, "Stigma: Notes on the Management of Spoiled Identity." Goffman defined stigma as an attribute that severely discredits an individual, transforming them from a whole and ordinary person into a socially tainted and flawed one. In the Indonesian context, the construction of HIV stigma is heavily influenced by moral and religious narratives that often equate the disease with sin or punishment (Prahartiwi et al., 2023).

This social construction operates at three main levels: the individual level (self-stigma), the interpersonal level (discrimination by family and friends), and the

institutional level (discriminatory policies). In Indonesia, stigma is often "hierarchical." For example, a person living with HIV who is infected through a blood transfusion may receive greater sympathy than someone who is infected through sexual behavior considered deviant. This distinction between "innocent victims" and "guilty perpetrators" is a highly damaging form of social construction because it creates a caste system in healthcare access. Responsive policies must deconstruct this narrative by emphasizing that health is a universal human right, regardless of the mode of transmission.

In Goffman's analysis, there is a crucial distinction between "discredited" and "discreditable" individuals. HIV patients whose symptoms are already physically visible or whose status is publicly known fall into the first category, where they must manage social interactions fraught with rejection. Meanwhile, the majority of people living with HIV (PLHIV) in Indonesia fall into the second category; they expend enormous emotional energy concealing their identity to avoid stigma. This "information management" poses a heavy daily psychological burden. National health policies often fail to recognize that the fear of transitioning from discreditable to discredited status is a primary reason why people are reluctant to seek HIV testing at government health facilities.

Stigma is also constructed through language and media representation. The use of stigmatizing terms in official documents or health campaigns often unintentionally reinforces societal prejudice. For example, the terms "sufferer" or "cursed disease," which sometimes still appear in public discourse, create social distance between the general public and people living with HIV. Policy reorientation requires standardized public communication based on human dignity. Deconstructing stigma means shifting society's perspective from viewing HIV as a moral issue to a public health issue that can be managed medically and socially supported.

In addition to religious and moral factors, the construction of stigma in Indonesia is also influenced by rigid gender norms. Women with HIV often experience more severe stigma than men. They are considered to have failed to maintain family integrity or are accused of carrying the virus to their children. This social construction places women in a highly vulnerable position to domestic violence (DV) after disclosing their HIV status. Therefore, health policies must integrate social and legal

protections for women diagnosed with HIV, ensuring that healthcare services do not become a gateway to further violence.

Institutional stigma also manifests itself in regional regulations that mandate HIV testing under certain conditions without guaranteeing confidentiality. This measure, while intended to control the epidemic, actually constructs HIV as a social security threat rather than a health issue. When a policy treats certain groups as suspicious objects of surveillance, it reinforces social segregation. Policy transformation must aim to eliminate all forms of discriminatory regulations and replace them with an empowering approach, where people living with HIV are viewed as partners in the response, rather than a burden or threat.

The long-term impact of this stigmatization is the creation of a hindered "moral career" for people living with HIV. They begin to internalize the negative values society places on them (internal stigma). This results in lowered self-esteem, self-isolation, and feelings of unworthiness for treatment. Internal stigma is an invisible killer; it works from within the individual's psyche, making them feel that treatment will be useless because their lives are already considered "broken." Policy-wise, psychosocial interventions to combat internal stigma should be given equal importance to clinical medical interventions.

De-stigma programs cannot be simply one-way lectures. They must involve structural changes in educational curricula, health worker training, and legal reform. Strengthening the role of communities as agents of change is crucial. When society sees that people living with HIV can live normal lives, work, and raise families without transmitting the virus to their partners (through the concept of U=U, Undetectable = Untransmittable), the social construct of HIV will slowly shift. National health policies must actively promote this latest science to break down the walls of stigma built on past ignorance and fear.

3.2.2 The Impact of Social Exclusion on Treatment Compliance

Social exclusion has a strong linear correlation with HIV treatment failure. Treatment adherence in HIV patients requires a high level of discipline in taking antiretroviral (ARV) medication for life. However, this discipline is not simply a matter of individual willpower; it is also strongly influenced by the support of the social

environment. When an individual is excluded from their family, workplace, or community, they lose a crucial support system for maintaining treatment motivation. Social exclusion creates feelings of loneliness and hopelessness, which are the main enemies of long-term adherence (Nurtanti et al., 2023).

Mechanistically, social exclusion affects adherence through several pathways. First, logistical barriers; people living with HIV who are evicted from their homes or lose their jobs due to stigma will not have the resources to regularly access health facilities. Second, psychological barriers; depression stemming from social exclusion reduces patients' cognitive abilities to follow complex treatment regimens. Third, privacy barriers; in highly discriminatory environments, patients may choose to discard their medications rather than be caught by others. This phenomenon of "drug throwing" is often found among people living with HIV (PLHIV) living in dormitories or densely populated areas lacking privacy (Siregar et al., 2025).

The most fatal impact of social exclusion is the phenomenon of Lost to Follow-Up (LTFU), or discontinuation of medication. In Indonesia, the LTFU rate remains a major challenge, especially in the first year of treatment. Analysis of LTFU patient data shows that the primary driving factor is not drug side effects, but rather the unbearable social burden. Patients often feel it is better to "slowly die from the virus" than to "socially die" due to ostracization. This social death occurs when an individual is still breathing biologically but is deemed non-existent or worthless by their social network.

HIV response policies must view LTFU as a failure of the social support system, not simply a failure of the patient. Reminder strategies via SMS or phone calls implemented by community health centers are often ineffective when patients are experiencing a crisis of exclusion. What is needed is a community intervention that can provide a "safe space" for patients. Peer Support Groups (PSGs) are the most powerful protective factor in maintaining adherence. Through peer support groups, patients gain social validation that they lack in mainstream settings. Therefore, funding for peer support groups must be systematically guaranteed within regional health budgets as part of a strategy to improve adherence.

Integrating health services with social protection is key to mitigating the impact of exclusion. For example, when a person living with HIV loses their job due to their

HIV status, health policies must be able to refer them to legal aid institutions or economic empowerment programs. Without economic certainty, adherence to treatment will always be a secondary priority for patients. Social exclusion also often distances patients from accurate medical information, making them more susceptible to alternative treatments that claim to cure HIV instantly but are actually life-threatening.

Recent research in Indonesia shows that people living with HIV who disclose their HIV status to at least one supportive family member have a 40% higher viral suppression rate than those who keep their status private (Nurtanti et al., 2023). This demonstrates that social inclusion is a supportive "medicine" that is as important as ARVs themselves. Therefore, post-test counseling should focus more on safe disclosure strategies and mapping the patient's social support network. Policies should not stop at providing medication; they must ensure that patients are embedded in a social ecosystem that supports their continued well-being.

Furthermore, policies are needed to reduce stigma in primary healthcare facilities. If a patient is already excluded in their community and then experiences discriminatory treatment at the community health center, then discontinuation of treatment is almost certain. Health facilities must be the last "bastion of inclusion" for people living with HIV. Friendly and non-judgmental service standards must be a key performance indicator for every healthcare worker. Values and human rights sensitivity training for healthcare workers is not merely an add-on, but a core component in ensuring national treatment adherence.

Social exclusion also impacts mental health, indirectly impairing the immune system and the body's response to therapy. The chronic stress burden of discrimination increases cortisol levels, which can exacerbate inflammatory conditions in people living with HIV. Thus, an inclusive public health approach has a strong biological basis. Championing social inclusion for people living with HIV is not only a matter of ethics and human rights, but a highly pragmatic public health strategy for achieving HIV elimination. Inclusion is key to the resilience of health systems in the face of this socially charged pandemic.

3.3 Financial Burden and Threat of Poverty Due to Chronic Disease

Although ARV drugs are provided free of charge by the Indonesian government, managing HIV as a chronic disease still places a significant financial burden on households. Healthcare costs extend beyond the cost of medication, encompassing the entire ecosystem of expenses arising from the illness. For families with lower-middle incomes, an HIV diagnosis is often a "turning point" that pushes them into catastrophic poverty. This burden is long-term and cumulative, encompassing additional medical costs for opportunistic infections and non-medical costs often overlooked in health policy considerations (Siregar et al., 2025).

This threat of poverty is exacerbated by the loss of productivity. HIV in the productive age group means the loss of potential income for the family. Often, not only do people living with HIV lose their jobs, but other family members also have to give up their work time to become caregivers. This phenomenon creates an intergenerational cycle of poverty: household funds that should be allocated for children's education or future investments are diverted to cover routine transportation to the hospital or the purchase of special nutrition. This chapter will examine the anatomy of the costs faced by PLHIV in Indonesia and why the current health financing scheme still leaves a large gap for impoverishment due to disease.

3.3.1 Non-Medical Out-of-Pocket (OOP) Catastrophic Expenses

Although Indonesia's National Health Insurance system covers basic medical costs and the government provides free antiretroviral (ARV) drugs, the actual costs incurred by people living with HIV (PLHIV) remain very high. This phenomenon is referred to in health economics as catastrophic out-of-pocket (OOP) costs. Costs are considered catastrophic when total household health expenditures exceed a certain threshold, typically 10% or 25% of total household income or expenditure (World Bank, 2024). For people living with HIV, non-medical costs often constitute a "hidden burden" that far outweighs the medical costs themselves.

A major component of these non-medical costs is transportation. Given that Treatment Support Care services are not evenly distributed across all community health centers, many patients must travel long distances to reach district or city general

hospitals. For those living in rural or island areas, the monthly cost of round-trip transportation to collect medication and undergo clinical check-ups can consume a significant portion of their daily income. In addition to transportation, the additional nutritional costs required to support effective treatment and the loss of daily wages due to time spent waiting in line at health services worsen families' financial situations. Health policies that focus solely on subsidizing drug commodities fail to recognize that these economic barriers are the primary reason patients drop out of treatment (lost to follow-up).

Empirical analysis of households living with HIV in Indonesia shows that those in the lowest economic quintile have a 3.5 times higher risk of experiencing catastrophic poverty than the general population with other chronic illnesses. This is due to the nature of HIV, which requires regular, lifelong visits. When a head of the household is diagnosed with HIV and begins to experience physical decline, the household's primary source of income is threatened. Furthermore, living costs increase due to additional medical needs. This situation often forces families to resort to destructive coping strategies (distress financing), such as selling productive assets (livestock or land), borrowing from loan sharks, or withdrawing children from school to help earn a living (Siregar et al., 2025).

National social protection policies must begin to accommodate these non-medical costs by integrating health programs with social assistance schemes. For example, providing transportation vouchers or additional food allowances for people living with HIV from poor families who demonstrate good medication adherence. Without interventions to address these non-medical OOP costs, the effectiveness of the trillions of rupiah annual ARV procurement budget will be wasted because patients cannot consistently access these drugs. Policy reorientation must shift from simply "clinical accessibility" to comprehensive "economic affordability" for patients.

Beyond direct costs, there are psychosocial costs that are difficult to quantify but have a real financial impact. The stigma attached to HIV often forces people living with HIV to seek healthcare services far from their homes to maintain confidentiality. This "distant but anonymous" approach to seeking care significantly increases transportation costs and travel time. In Indonesia, this phenomenon is very common,

where patients from District A instead pick up medication in District B because they fear meeting relatives or neighbors at the local community health center.

This "confidentiality" cost is an additional tax that people living with HIV must pay due to societal stigma. De-stigma policies in primary health care facilities are crucial not only for human rights reasons but also for patient economic efficiency. If patients feel safe and comfortable accessing services at the nearest community health center (Puskesmas), transportation costs can be drastically reduced, ultimately improving their household's economic resilience. Therefore, the fight against stigma is actually a fight to reduce catastrophic poverty among marginalized groups.

3.3.2 The Impact of HIV on Household Productivity

HIV/AIDS primarily affects the productive age group (15-49 years). This has a significant macroeconomic impact through decreased labor productivity. At the micro-household level, this impact is felt through two channels: the individual channel (patients living with HIV cannot work) and the caregiver channel (other family members stop working to care for them). Studies in several regions in Indonesia show that households with members with advanced HIV experience an average income reduction of 30-50% (BPS, 2024). This decline is often permanent due to workplace discrimination that prevents people living with HIV from returning to work, even though their physical condition has improved after ARV treatment.

The risk of intergenerational poverty is a real threat. When parents' incomes decline drastically, budget allocations for children's education and health are often sacrificed. Children growing up in poor households with HIV are more likely to experience stunting due to malnutrition and have high school dropout rates. This creates a cycle of poverty that is difficult to break: poverty leads to vulnerability to HIV, and HIV deepens poverty, which is then passed on to the next generation through barriers to access to education and nutrition.

To mitigate this impact on productivity, HIV response policies must collaborate with the employment sector. Protection of the employment rights of people living with HIV (PLHIV) must be strengthened through the enforcement of anti-discrimination regulations in the workplace. Furthermore, medical rehabilitation programs must be accompanied by economic empowerment or reskilling programs for people living with

HIV so they can remain independently productive. A "economic self-sufficiency" strategy for people living with HIV is a key component of holistic chronic disease management.

Furthermore, the government needs to consider income insurance schemes for informal sector workers affected by chronic illnesses. Given that the majority of Indonesia's population works in the informal sector without adequate social security coverage, a single diagnosis of advanced HIV can devastate a family's entire economic structure. Strengthening more inclusive social security will provide a safety net that allows patients to focus on their health recovery without having to constantly worry about their families' daily livelihoods. This is the essence of public health governance that is responsive to the socio-economic realities of its citizens.

CHAPTER 4: GEOGRAPHIC DISPARITY: THE CHALLENGE OF SPACE AND ACCESS

4.1 Analysis of Health Infrastructure Disparities Between Regions

Indonesia, as the world's largest archipelagic nation with over 17,000 islands, faces unique challenges in the equitable distribution of healthcare services. Geographic disparities constitute a structural barrier that creates a sharp disparity in access between central regions (Java and Bali) and peripheral regions (Eastern Indonesia, border areas, and remote islands). In the context of HIV/AIDS, this disparity is not only a matter of physical distance but also of the availability of advanced diagnostic facilities, the availability of skilled personnel, and the stability of the drug supply chain, which is highly dependent on regional connectivity (Ministry of Health of the Republic of Indonesia, 2024).

A health geography analysis shows that health infrastructure development in Indonesia remains highly centralized. Most National Referral Hospitals and Viral Load (VL) reference laboratories are located on the island of Java. This creates a tremendous logistical burden for regions outside Java. For example, blood samples for viral load testing from remote Papua often have to be flown to Makassar or Jakarta, which is time-consuming and risks compromising specimen quality. This infrastructure gap directly contributes to delays in treatment initiation and monitoring of therapy success, ultimately increasing AIDS mortality rates in remote areas.

4.1.1 Concentration of PDP Services in Java-Bali vs. Outside Java

Treatment Support Care (PDP) services are the spearhead of HIV management. In Java and Bali, the integration of PDP services at the community health center (Puskesmas) level has been quite successful, with extensive coverage. A person living with HIV in Yogyakarta or Denpasar may only need to travel less than 5 kilometers to receive ARVs. However, this contrasts sharply with areas in North Maluku or North Kalimantan, where a single PDP service may have to serve a district equivalent to half

the size of Central Java Province, often with poor road access or requiring a sea crossing.

The concentration of services in Java and Bali is not only due to the higher number of detected cases, but also to the readiness of human resources and more stable supporting infrastructure (such as electricity and internet). This disparity creates an "access caste" phenomenon in HIV response. National health policies have tended to use a "level playing field" approach to resource allocation, without considering the geographic difficulty index. As a result, geographically difficult areas receive inadequate allocations to address their access barriers, such as high drug delivery costs or the operational costs of mobile clinics.

This disparity also triggers the phenomenon of health migration. Many people living with HIV from outside Java are forced to move or settle in Java simply to ensure they receive adequate healthcare. This forced migration increases the socioeconomic burden on patients and leads to the loss of family support networks in their home regions. From a spatial justice perspective, every citizen should have the right to access standard healthcare services wherever they are, without being uprooted from their social environment. Policy transformation should lead to a more aggressive deconcentration of services outside Java by strengthening community health centers (Puskesmas) in remote areas to provide independent patient-centered services.

The government needs to implement an "asymmetric" policy in health funding, with regions with high geographical difficulties receiving a larger per-capita allocation to compensate for the costs of service transmission. Furthermore, investment in basic infrastructure such as medical piers, water ambulances, and strengthening the cold chain for drug storage in the archipelago is urgent. Without equitable physical infrastructure, the slogan "HIV elimination 2030" will only become a reality in major cities in Java, while peripheral areas will remain neglected pockets of the epidemic.

4.1.2 Availability of CD4 and Viral Load Laboratories in Eastern Indonesia

Monitoring the success of HIV treatment currently relies heavily on routine Viral Load (VL) testing. The World Health Organization (WHO) recommends VL testing at least once a year to ensure viral suppression and prevent drug resistance. However, the availability of PCR machines for VL testing remains highly uneven. In Eastern Indonesia (KTI), these facilities are very limited and often concentrated only in provincial capitals. This results in many people living with HIV in KTI undergoing treatment for years without ever knowing whether their medications are truly working (Ministry of Health of the Republic of Indonesia, 2024).

This gap in diagnostic technology contributes to a high rate of therapy failure due to late detection. Without routine VL results, doctors tend to continue prescribing first-line regimens even when patients have developed resistance, ultimately worsening their clinical condition. Geographical constraints also complicate the logistics of shipping blood samples, which require special handling to prevent lysis during transit. In areas with irregular flight schedules, samples often spoil before reaching the reference laboratory, requiring patients to be reinjected and the shipping process to begin again.

To address this laboratory disparity, innovation in point-of-care testing (POCT) technology is needed. The use of portable, easy-to-operate VL testing devices at the community health center (Puskesmas) level could be a game-changer for remote areas. While the per-test cost may be higher than centralized testing, the savings in sample delivery logistics and the speed of clinical decision-making make it more efficient overall in the long run. National medical equipment procurement policies should prioritize the deployment of POCT technology to areas with the highest levels of geographic difficulty.

Beyond providing equipment, the laboratory's human resource capacity in Eastern Indonesia also needs to be significantly improved through intensive training and attractive incentive systems. The development of a specimen logistics system integrated with national airlines and local couriers must also be formalized in policy.

Disparities in diagnostic technology reflect the disparity in scientific progress between regions. Bridging this gap is a concrete step towards achieving equitable health equity across the archipelago, ensuring that people living with HIV in Merauke receive the same standards of monitoring as those in Jakarta.

4.2 Logistics and Supply Chain of ARV Drugs in the Archipelago Region

Supply chain management is the backbone of successful long-term HIV therapy. For an archipelagic nation like Indonesia, medical logistics is not simply a matter of transporting goods, but rather a matter of national health security. Antiretroviral (ARV) drugs must be continuously and continuously available for patients throughout their lives. However, Indonesia's geographical realities create incredibly complex challenges. Drug distribution from the center (Jakarta) to the provincial, district, and community health centers (Puskesmas) levels on the outermost islands often encounters systemic obstacles, leading to stockouts. This is a highly dangerous situation, as treatment interruptions can trigger drug resistance in patients and mass treatment failure.

These logistical challenges stem from a distribution model that remains highly centralized and heavily dependent on unequal commercial transportation infrastructure. In island regions like Maluku, East Nusa Tenggara, and Papua, ship and pioneer flight schedules are often erratic due to weather or technical difficulties. This leads to unpredictable lead times for drug deliveries. Policy analysis shows that the current logistics system does not fully consider the "geographic difficulty index" as a key variable in distribution planning, so that the areas that need it most are often the last to receive supplies (Sholihah et al., 2024).

4.2.1 Geographical Constraints and Service Transmission Costs

Geographical constraints directly contribute to the ballooning costs of healthcare delivery. In the logistics economy, the "Last Mile" cost—the final stage of delivery from the district pharmacy warehouse to a remote health facility—is the most expensive and difficult to manage. In mainland Java, this cost may be minimal, but in

the archipelago, the cost of shipping a box of ARV drugs can exceed the cost of the drugs themselves if a motorboat or small plane is chartered. These transmission costs often fall on limited regional budgets, making it difficult for many district health offices to routinely distribute supplies to remote community health centers (Puskesmas).

Supply chain integrity is also significantly impacted by storage conditions during transit. ARV drugs require stable storage temperatures to maintain their chemical efficacy. In tropical regions with high humidity and frequent power outages, maintaining a cold chain, or at least controlled room temperatures, in peripheral community health center warehouses is a significant challenge. Drug damage due to poor storage is not only a financial waste but also a medical risk to patients. Therefore, logistics policies must include investment in IoT (Internet of Things)-based temperature monitoring technology to ensure drug quality is maintained until it reaches patients in the most remote areas.

In addition to physical factors, administrative constraints within the pharmaceutical bureaucracy often slow distribution. The manual stock reporting system in some regions results in data at the central level being out of sync with actual needs on the ground. Situations often arise where a district reports excess stock, while a neighboring district experiences a complete shortage. However, inter-regional borrowing mechanisms are hampered by rigid government asset accounting regulations. The fragmentation of authority between the central government (procurement) and regional governments (distribution) creates coordination gaps that often harm patients.

Addressing these logistics issues requires a reorientation towards a proactive and fully digitalized stock management system. The use of an integrated logistics information system (SMILE or SIHA Logistik) should be mandatory down to the lowest service level. With real-time data, the central government can intervene early in distribution before stocks run out. Furthermore, budget flexibility is needed to cover transmission costs in areas with high geographic challenges, ensuring that distance does not become a barrier to the availability of essential medicines. The disparity in port and airport infrastructure in Eastern Indonesia also hampers distribution speed. In some areas of Southeast Maluku, for example, drug shipments can only be made once a

month, following the Pelni ship schedule. If there is a surge in new patients or stock damage due to a natural disaster, health facilities must wait long periods for new supplies. This situation forces health workers to "ration drugs," where patients who are supposed to receive 30 days' worth of medication are only given 10 days' worth.

This practice of "rationing drugs" is highly detrimental to people living with HIV because it increases the frequency of their visits to health facilities, which means increased transportation costs and the risk of lost work time. From a clinical perspective, it also disrupts the psychological stability of patients who are constantly anxious about the availability of their medications. Therefore, logistical solutions are not simply about moving goods, but about providing certainty for patients. Buffer stock warehouses are needed at the regional or island cluster level to shorten distribution distances and reduce dependence on transportation schedules from provincial capitals or Jakarta.

4.2.2 Distribution Innovation in Isolated Areas

Facing conventional logistical bottlenecks, various innovations have emerged to ensure drug access in isolated areas. One of the most effective strategies is Multi-Month Dispensing (MMD), which provides a single dose of ARVs for stable and compliant patients. The MMD policy drastically reduces the frequency of patient visits to health facilities, directly reducing transportation costs and the risk of discontinuation due to geographic constraints. In Indonesia, MMD implementation has accelerated since the COVID-19 pandemic, but its reach in Remote, Border, and Island Areas still needs to be expanded (United Nations Development Programme [UNDP], 2023).

In addition to MMD, community-based innovations are key to bridging the gap between community health centers (Puskesmas) and patients' homes. The use of community couriers or Peer Support Groups (KDS) to deliver medications directly to patients' homes (home delivery) has been shown to increase treatment retention rates. This model not only addresses transportation issues but also provides privacy protection for patients who are afraid to visit health services due to stigma. However, for this model to be sustainable, a clear funding scheme is needed to cover the operational costs

of community couriers, who have often been volunteer-based or dependent solely on unstable donor funding.

The use of digital technology is also beginning to penetrate logistics management at the grassroots level. Mobile-based medication tracking applications allow patients to independently monitor stock availability at their community health centers, eliminating the need for long, wasteful trips if medication is out of stock. In the future, the potential use of drones for medication delivery to small islands or areas isolated by landslides deserves serious consideration as part of the healthcare technology transformation. While the investment costs are high, the savings in human lives and the long-term effectiveness of the healthcare system are far more valuable.

Another innovation that needs to be encouraged is the decentralization of laboratories through the use of Point-of-Care diagnostic tools. Like medication distribution, the distribution of blood samples for viral load testing also faces the same geographical constraints. By providing portable viral load testing devices that can be operated by nurses or midwives at the community health center level, clinical decisions can be made more quickly without having to wait for samples to be shipped to large cities. Integrating drug logistics and diagnostic innovations will create a self-service ecosystem in remote areas, reducing dependence on fragile central supply chains.

However, the success of any such innovation depends heavily on the political commitment of local governments. Innovation often faces challenges with rigid financial accountability regulations, where community drug delivery costs are deemed legally unaffordable through the regional budget. Therefore, a national legal framework is needed to legitimize these non-conventional distribution models. Policy transformation must embrace local flexibility and creativity as part of a public health resilience strategy in an archipelagic nation.

4.3 Population Mobility and Cross-Border Distribution Patterns

High population mobility is a key characteristic of development in contemporary Indonesia. Human movement, whether in the form of permanent migration, circular migration (commuting workers), or cross-border mobility, has a significant impact on HIV transmission patterns. The dynamics of mobility create

challenges for the continuity of health services; a patient who begins treatment in one area may have to move to another for work, and they often "disappear" from the monitoring system due to the lack of nationally integrated medical records (Prasetyo, 2023).

This mobility pattern often follows economic corridors, such as the construction of toll roads, new ports, and industrial areas. Areas experiencing economic booms often attract thousands of productive-age workers who are far from their families. This sociological condition, if not accompanied by adequate health services, can fuel the growth of the adult entertainment industry and risky sexual behavior around industrial areas. This phenomenon makes new economic development areas "hotspots" for HIV transmission, requiring special attention in regional health policy planning.

In mining and plantation industrial areas, for example, there is a concentration of productive-age men with high purchasing power but minimal access to reproductive health education. This internal migration creates an "epidemiological bridge" between low-prevalence areas and high-prevalence areas, or vice versa. Problems arise when these workers return to their home regions during long holidays or after their contracts expire, potentially bringing the virus to their partners in the village. HIV in the workplace policies must be an absolute requirement for large companies to ensure workers have access to testing and treatment without fear of discrimination.

In addition to internal mobility, Indonesia also faces the challenge of cross-border transmission, particularly in the border regions of Papua and Papua New Guinea, and Kalimantan and Malaysia. The porous borders, where residents frequently cross for customary or economic activities, make epidemic control a matter of diplomacy and international cooperation. Disparities in service standards and drug availability across border countries often lead to patients switching medication regimens uncontrollably, leading to the emergence of drug-resistant viral variants.

To respond to these mobility dynamics, national health policy must adopt the principle of "borderless service." Integrated electronic medical records (such as the SatuSehat platform) are a crucial tool for enabling people living with HIV (PLHIV) to access ARV drugs at any health facility across Indonesia simply by showing their national identification number (NIK). Furthermore, health services at transit points such as major ports and inter-city terminals need to be strengthened. Health services at borders must also be strengthened through bilateral cooperation that includes synchronized treatment protocols and cross-border referral systems.

This chapter emphasizes that geography and mobility are not merely barriers but variables that must be managed within the public health policy architecture. Understanding human movement patterns allows governments to implement more precise interventions, such as placing services along migration routes or conducting prevention campaigns targeted at migrant workers. Thus, HIV policy is no longer static and based solely on administrative areas, but rather dynamic and follows population movements, ensuring that no citizen is "forgotten" simply because they are moving in search of a better life.

CHAPTER 5: RESPONSIVE PUBLIC HEALTH GOVERNANCE

5.1 Dynamics of Decentralization in Policy Implementation

Responsive public health governance is an absolute prerequisite for successful HIV/AIDS management in a country as sociopolitically diverse as Indonesia. Since the reform era and the implementation of regional autonomy, authority in the health sector has undergone significant decentralization. Theoretically, decentralization promises services that are more closely aligned with local needs, responsive to cultural contexts, and increase public accountability. However, in practice, decentralization often proves a double-edged sword for programs with high social sensitivity, such as HIV/AIDS. Program success is no longer solely determined by the quality of clinical technical support from the Ministry of Health, but also depends heavily on how policies are translated, budgeted, and implemented by local governments (Agustina et al., 2022).

HIV policy implementation in the decentralized era faces the challenge of fragmented authority. Although the central government establishes NSPK (Norms, Standards, Procedures, and Criteria), resource availability at the district/city level varies widely. This dynamic is influenced by Law Number 23 of 2014 concerning Regional Government, which divides concurrent government affairs in the health sector. Problems arise when HIV prevention is considered a discretionary issue or not a priority for the Minimum Service Standards that regional heads deem urgent. As a result, regions with high caseloads but low local revenue (PAD) often lag in achieving national elimination targets.

Furthermore, decentralization creates challenges in coordination across administrative boundaries. The virus knows no district boundaries, but the budgets and authority of health workers are severely limited by these autonomous boundaries. For example, a patient from District A working in City B may face administrative barriers when trying to access services at their workplace due to issues with synchronizing funding between regions. Responsive governance demands inter-regional collaboration

mechanisms facilitated by provincial governments, acting as representatives of the central government. Without these coordination bridges, decentralization will only widen disparities in healthcare access between regions.

Analysis of the effectiveness of decentralization also reveals the phenomenon of "unequal institutional capacity." Some local governments have demonstrated remarkable innovation by creating outreach programs integrated with local wisdom. However, in many other regions, the health bureaucracy remains highly rigid and lacks innovation. This is exacerbated by the reshuffling of health department officials, often based on practical political considerations rather than professional competence. Responsive governance requires stable bureaucratic leadership with a deep understanding of the dynamics of HIV epidemiology in their respective regions, ensuring that policies are evidence-based and sustainable.

Substantively, responsive governance in the context of HIV-AIDS must balance a top-down approach (national instructions) with a bottom-up approach (community aspirations). Often, policies designed in Jakarta are difficult to implement at the village level due to differences in social values. Therefore, decentralization should be utilized as a space for "policy localization." Regional governments need to be given broader authority to adjust intervention strategies without deviating from national targets. The success of decentralization is measured not by how obedient regions are to the central government, but by how effectively regions can protect the health of their citizens through innovative and inclusive policies.

This chapter will examine how local political dynamics, fiscal availability, and budget transparency are determining factors in realizing responsive public health governance. We can no longer view HIV solely as a technical medical issue; it is a political development issue that requires committed leadership at all levels of government. Governance transformation is key to closing the gap between ideal policy documents and the reality of implementation, which is often fraught with bureaucratic and political obstacles.

5.1.1 Variations in Regional Government Political Commitments (HIV Regional Regulations)

The political commitment of local governments is the most crucial variable in the sustainability of post-decentralization HIV programs. One legal instrument frequently used by regions to demonstrate their commitment is the establishment of Regional Regulations on HIV-AIDS Management. To date, hundreds of regencies/cities in Indonesia have enacted HIV regulations. However, critical analysis reveals wide variation in the quality of these regulatory substances. Many are merely symbolic, simply copying national regulations without concrete budget allocations or detailed operational mechanisms at the local level (Mahendradhata et al., 2021).

This variation in commitment is also reflected in the content of the regulations, which sometimes contradicts the spirit of human rights. In some regions, HIV regulations contain discriminatory or punitive articles against key populations, under the guise of maintaining public morality. This demonstrates that regional political commitment is often caught in the crossfire between public health interests and the electoral interests of regional heads seeking to accommodate conservative sentiments. These discriminatory regional regulations actually create barriers for vulnerable groups in accessing health services, ultimately undermining the overall elimination target.

In contrast, regions with progressive political commitment have used regional regulations as a foundation for integrating HIV services into the regional budget and ensuring protection for people living with HIV from discrimination in the workplace. Strong political commitment usually stems from the leadership of regional heads who have a long-term vision for human development. Regional heads who are aware of the long-term economic burden of AIDS tend to be more willing to allocate resources for early prevention. Therefore, advocacy with political decision-makers in the regions is as important as medical education for the community.

To standardize this commitment, the central government, through the Ministry of Home Affairs, needs to conduct regular evaluations of regional health regulations. Incentive mechanisms (such as Regional Incentive Funds) are needed for regional

governments that successfully achieve HIV SPM indicators and have inclusive regulations. Without central government encouragement and oversight, variations in regional political commitment will continue to create "geographical injustice," where the quality of life of people living with HIV is determined by the level of concern their regent or mayor places on this issue. Political commitment is not just about rhetoric in speeches, but about the courage to allocate rupiah for humanity.

5.1.2 Regional Fiscal Policy and Post-Donor Funding Sustainability

One of the biggest threats to Indonesia's HIV program today is the "funding gap" that has emerged with the planned reduction of international aid, particularly from the Global Fund. For years, many critical components of the HIV response—such as community outreach, peer support, and the operations of regional AIDS Commissions (KPA)—have been funded by donors. When this aid began to be withdrawn, many local governments were not fiscally or administratively prepared to transfer this funding into their Regional Budgets (USAID, 2023).

This fiscal challenge is exacerbated by the low fiscal capacity of many districts/cities. Regional health budgets are often consumed by personnel expenses (salaries) and hospital construction, leaving very little room for preventive and promotive activities. Furthermore, there are obstacles in the budgeting structure, where community outreach activities are often difficult to include in regional budget account codes due to their informal nature. This has resulted in the loss of financial support for NGOs and community groups, which have traditionally been at the forefront of the field, leading to a decline in the number of new cases detected.

To ensure sustainability, local governments need to diversify funding sources and improve budget efficiency. Utilizing Village Funds for grassroots HIV education and prevention activities is an untapped opportunity. Furthermore, the full integration of HIV service financing into the National Health Insurance (JKN) scheme must be continuously encouraged to eliminate the burden of treatment costs from relying on ad-hoc programs. Fiscal sustainability is not just about the availability of funds, but also

about reforming regional financial management systems to be more flexible in responding to the healthcare needs of marginalized groups.

The central government needs to establish a minimum percentage of the regional budget allocation for infectious disease control, including HIV, as part of compliance with the Minimum Service Standards. Furthermore, partnership mechanisms with the private sector need to be developed through targeted Corporate Social Responsibility programs. The transition from donor dependence to fiscal independence is a test of Indonesia's health sovereignty. If regions fail to allocate adequate budgets, decades of investment in HIV control risk being wasted.

5.2 Multisectoral Collaboration and the Role of the Non-Governmental Sector

HIV-AIDS prevention will never be successful if it rests solely on the health sector. The complexity of the HIV problem, which encompasses social, legal, economic, and cultural dimensions, requires solid multisectoral collaboration. In the concept of modern public health governance, the role of the non-governmental sector—including Community Organizations (CBOs), Non-Governmental Organizations (NGOs), the private sector, and religious organizations—is crucial. This collaboration is often referred to as the "Pentahelix" approach, where government, academics, businesses, communities, and the media work together toward a common vision (World Health Organization, 2023).

However, the biggest challenges to multisectoral collaboration in Indonesia are sectoral egos and weak coordination mechanisms. Many non-health agencies still consider HIV issues the exclusive responsibility of the Health Office. The Education Office, for example, is sometimes reluctant to include reproductive health and HIV topics in the curriculum due to perceived taboos. Similarly, the Social Service Office sometimes lacks specific social protection programs for people living with HIV. Responsive governance requires a strong coordinating institution at the regional level (such as the AIDS Commission or a joint secretariat) capable of integrating these diverse sectoral interests into a unified regional action plan.

The role of the non-governmental sector, particularly NGOs working on HIV, has proven to be an effective gap filler in areas where government outreach is difficult. NGOs offer flexibility and closeness to key populations that the public health center bureaucracy lacks. They are able to build trust with marginalized groups, facilitating referrals to health facilities. However, NGOs are often legally and financially vulnerable. Policies are needed to legitimize the role of this non-governmental sector, for example, through a type III self-management mechanism that allows NGOs to obtain government funding to implement specific public health programs.

A true partnership requires equality between the government and the non-governmental sector. The private sector also holds significant potential, not only through CSR funding but also through the implementation of workplace HIV policies to protect employees and create a healthy work environment. When all sectors act in sync, the burden of HIV response is lighter, and the impact is more substantial. Multisectoral collaboration is a manifestation of the principle that health is a shared responsibility of all elements of the nation.

5.2.1 Community-Based Service Integration

Community-based services are a governance innovation that positions communities as both subjects and objects of health development. Integrating these services into the formal health system is a strategic step to increase testing and treatment coverage. Communities serve not only as companions but also as extensions of the health system, capable of conducting initial screening (through HIV self-testing) and supporting treatment retention at the smallest neighborhood level. This integration aims to create more humane, less stigmatizing, and more accessible services for those who have been marginalized (UNAIDS, 2024).

However, this integration process is often hampered by stringent medical and administrative standards. Community workers are often considered incompetent by medical professionals, even though they possess the sociological expertise essential for HIV case management. Therefore, competency standards for community workers and formal recognition of their role in the national referral system are needed. Integration

policies must ensure that data collected by communities can be synchronized with the national health information system, without violating the principle of patient confidentiality.

Integrating community-based services also means providing space for people living with HIV (PLHIV) to actively participate in policy planning and evaluation at community health centers or health offices. The principle of Greater Involvement of People Living with HIV/AIDS (GIPA) must be implemented substantively, not merely through lip service. By meaningfully involving communities, health services will be more responsive to patients' real needs, ultimately improving satisfaction and treatment adherence. The future of HIV governance in Indonesia lies in the strength of the synergy between the walls of community health centers and the organic forces within the community.

5.2.2 Strategic Partnership between Government and Private Sector

Public-Private Partnerships in the health sector are an increasingly vital tool for addressing limited public resources. In the context of HIV/AIDS prevention in Indonesia, private sector involvement is often viewed narrowly as providing funding through Corporate Social Responsibility programs. However, the private sector's potential spans a much broader spectrum, from providing clinical services in company clinics to improving logistics supply chain efficiency to information technology innovation. National strategies must shift this paradigm toward strategic partnerships with a symbiotic, mutualistic approach, where the private sector plays an active role in maintaining the health of its workforce (World Bank, 2024).

In high-risk industrial sectors such as mining, plantations, and construction, which employ thousands of male migrant workers, the role of companies is crucial. Companies that proactively provide anonymous and non-discriminatory workplace HIV testing and counseling have been shown to reduce absenteeism and increase long-term productivity. However, a major barrier to these partnerships is the company's fear of additional financial burdens and the potential negative stigma associated with high HIV prevalence among its employees. Therefore, the government needs to provide a

regulatory framework that provides incentives, such as tax deductions for corporate healthcare investments, as well as strict guarantees of data confidentiality.

Integrating private healthcare services into the national referral system is also a key component. Many HIV patients, especially those from the upper middle class or those who prioritize privacy, prefer to access specialist doctors at private hospitals rather than community health centers. However, private hospitals are often not integrated with the SIHA reporting system or lack access to government-subsidized ARV drugs. This leads to data fragmentation and substandard treatment. Strategic partnerships should ensure that private healthcare facilities receive training and accreditation to provide HIV services according to national standards, with the same logistical support from the government.

Furthermore, the private sector can contribute to technological innovation. Financial technology (FinTech) or logistics companies can collaborate with the government to create a more efficient drug distribution system to remote areas through integrated delivery service schemes. Responsive public health governance must leverage the agility of the private sector to offset government bureaucratic weaknesses in distribution speed and logistics tracking accuracy. By building this collaborative ecosystem, the burden of HIV control becomes a sustainable collective responsibility, not solely a burden on the public sector budget.

Furthermore, strategic partnerships also include the involvement of employer associations and labor unions. Strengthening the "HIV in the Workplace" policy, based on Minister of Manpower Regulation No. 68 of 2004, must be continuously encouraged to eliminate unilateral layoffs due to HIV status. The private sector must be convinced that employing people living with HIV who are in stable condition and undergoing treatment is a rational and ethical business decision. Protecting employment rights for people living with HIV represents a very tangible economic contribution from the private sector to reducing poverty caused by chronic illness.

The success of this partnership depends heavily on transparency and trust between parties. The government must act as both regulator and facilitator, ensuring

that this collaboration does not violate the principles of social justice and does not lead to the commercialization of services that harm the poor. This partnership model must be periodically evaluated based on public health outcomes, not solely on the financial investment value. In this way, the private sector will become a strong pillar of support in achieving national health independence following the withdrawal of international donor funding.

5.3 Transparency and Accountability of HIV-AIDS Budget Management

Transparency and accountability are two key pillars of sound public financial governance. In HIV-AIDS response programs, where budgets often come from multiple sources (the national budget, regional budgets, and international grants), transparent management is both complex and crucial. Accountability not only means that funds are spent according to administrative regulations, but also that the spending provides tangible health impacts (value for money). Without adequate transparency, there is a risk of budget overlap or, conversely, underfunding of critical areas (Ministry of Health of the Republic of Indonesia, 2024).

A classic problem with health budgets in Indonesia is the limited public access to detailed budget allocations at the regional level. The public, including people living with HIV (PLHIV), often do not know how much of the budget is allocated for drug provision, support operations, or prevention campaigns. Budget transparency requires data that is accessible and easily understood by non-governmental stakeholders. Using digital platforms to monitor fund flows in real time is a step forward in preventing budget leakage and ensuring funds reach health facilities at the grassroots level without bureaucratic hurdles.

5.3.1 Monitoring Budget Absorption at the Regency/City Level

One indicator of weak accountability is low budget absorption at the regional level. Cases frequently occur where budgets are available in the regional budget, but cannot be executed by the end of the fiscal year. The main causes are complex

procurement procedures for goods and services, regional officials' fear of legal issues resulting from imperfect administration, and delays in the issuance of technical instructions from the central government. Budget absorption must be closely monitored through a monthly reporting system integrated with health performance. If budget absorption is low, case detection and treatment targets will automatically be hampered (USAID, 2023).

Low budget absorption often impacts the procurement of non-drug logistics, such as diagnostic test kits or laboratory materials, which are budgeted through the Non-Physical Special Allocation Fund (DAK). When DAK absorption is low, health facilities experience test kit shortages, which directly halt early detection activities in the field. Therefore, accountability for budget management also encompasses the managerial capacity of staff at district/city health offices. Special training on health financial management is needed for HIV program managers to increase their confidence and competence in managing the available budget.

Besides absorption, budget efficiency is also a concern. Often, more budget is spent on official travel, coordination meetings, and honoraria than on direct patient care. Public accountability demands a shift in budget allocation toward strengthening primary care and community support. Periodic analysis of health expenditure (Health National Accounts) at the regional level is essential to map whether budget allocations align with the region's epidemiological priorities. If HIV cases are increasing among adolescents, but the budget is largely allocated to irrelevant activities, the governance system is considered unaccountable.

Transparency also encompasses the management of grants from the Global Fund or other donors managed by civil society organizations (CSOs). CSOs receiving public funds or international grants must adhere to the same stringent audit standards as government agencies. This is crucial to maintaining public and donor trust in civil society movements. With transparency at all levels, the potential for corruption can be minimized, and the effectiveness of every rupiah in saving the lives of people living with HIV can be optimized. Accountability is the promise of the government and its partners to the public that health is not compromised by bureaucratic inefficiency.

5.3.2 The Role of Social Audit in Service Oversight

Social audits are a mechanism through which service recipients (in this case, people living with HIV and affected communities) participate in monitoring budget utilization and the quality of services they receive. In Indonesia, the practice of social audits has been introduced as a way to strengthen health democracy. Communities can provide feedback on drug availability, health worker behavior, and facility cleanliness. This feedback should serve as a basis for government improvements and as an indicator of successful budget utilization. Social audits create an organic "check and balance" mechanism at the grassroots level.

However, the implementation of social audits faces challenges in the form of repression or neglect from service providers. Health workers or service officials sometimes feel threatened by community oversight. Therefore, regulations are needed to protect community activists who monitor budgets. Responsive governance must view communities not as adversaries, but as the eyes and ears of the government on the ground. When budget transparency meets active community participation, health system accountability significantly increases, fostering a sense of shared ownership of HIV response programs.

5.3.3 Digitalization of Budget and Logistics Tracking

The era of digital transformation offers solutions to perennial transparency issues. The use of e-budgeting and e-procurement systems integrated with the Regional Government Information System allows for digital traceability of every transaction. For HIV programs, the integration of drug logistics data (SIHA) with financial data is crucial to ensure timely drug procurement and the correct quantities, in line with patient projections. Digitization reduces the opportunity for subjective or manipulative human intervention in the budgeting process.

In addition to upward transparency (to the central government and auditors), digitalization must also provide downward transparency (to patients). For example, through a mobile app, patients can verify their National Health Insurance membership

status and ensure that the services they receive align with the claims submitted by hospitals to BPJS Kesehatan. This prevents fraudulent practices or fictitious claims that harm state finances. Digital transformation in health financial governance is an absolute prerequisite for creating a clean, effective, and sustainable health system towards the 2030 target of drug elimination.

5.3.4 Fiscal Sustainability and Donor Exit Strategy

The biggest accountability challenge currently is ensuring the transition of funding from international donors to domestic sources proceeds without service disruption. The central government must have a clear transition roadmap agreed upon by all local governments. Accountability during this transition period means ensuring that any transferred responsibilities (e.g., funding for field workers) are properly budgeted in the regional budget (APBD) before donor funding ends. Failure to plan this transition would be considered a serious governance failure, as it would jeopardize the continuity of treatment for thousands of patients.

Fiscal sustainability requires creativity in exploring new funding sources at the local level. In addition to the pure APBD, utilizing Village Funds and integrating with private health insurance schemes for formal workers could be solutions. Transparency in this transition process must involve open dialogue with affected communities to ensure they understand potential changes to service delivery. Ultimately, accountability for HIV budget management is about how the state demonstrates its constitutional commitment to ensuring health for all citizens without exception, regardless of the presence or absence of foreign aid.

CHAPTER 6: SYNTHESIS: TOWARDS INCLUSIVE AND ADAPTIVE POLICIES

6.1 Geographic Justice-Based Policy Transformation

After exploring the various dimensions of obstacles—from the human resource crisis to economic inequality to stark geographic disparities—this book concludes with a synthesis. The main conclusion of this analysis is that national health policy can no longer be merely technocratic and centralized. We need a radical transformation toward policies based on the principle of geographic equity. Geographic equity means that every individual, whether living in downtown Jakarta or in the remote mountains of Papua, should receive the same standard of quality healthcare. Healthcare should no longer be a "zip code lottery" where location determines life expectancy (Marmot, 2020).

A transformation based on geographic equity demands a shift in resource allocation. The population-based budget allocation model must be changed to one that considers the geographic difficulty index and local epidemiological burden. Regions with significant logistical challenges must receive greater financial compensation to ensure service prices remain affordable for the public. Furthermore, the deconcentration of advanced diagnostic technology must be aggressively pursued. We can no longer allow Eastern Indonesia to lag in access to viral load testing simply because of high investment costs. The cost of inaction is far more expensive than the cost of infrastructure investment today.

6.1.1 Deconcentration of Services to Village Level Model

Future HIV-AIDS policy transformation must boldly go beyond integration at the community health center level. Deconcentrating services to the village level through optimizing the support of community health centers and Primary Health Posts is a strategic step to overcome the geographic and economic barriers that currently hinder people living with HIV in peripheral areas. This model assumes that basic services such

as education, self-screening, and medication adherence support must be available as close as possible to the patient's home. By bringing services to the village level, we effectively cut catastrophic transportation costs and eliminate the "lost time" that often leads to patient discontinuation of treatment (Ministry of Health of the Republic of Indonesia, 2024).

In this deconcentrated model, the role of village health cadres and midwives is crucial. They are not tasked with performing complex medical procedures but rather serve as health navigators, assisting people living with HIV in navigating the often confusing referral system. Specially trained village cadres can play a role in the distribution of ARV drugs through a legal "community delivery service" scheme. Furthermore, Integrated Health Posts can provide a safe space for early HIV screening for pregnant women and other at-risk groups, eliminating the stigma that typically arises when they visit specialized clinics in large hospitals. This decentralization is a concrete manifestation of strengthening the community-based health system.

However, decentralizing services to the village level requires a robust data infrastructure and strict confidentiality measures. Privacy is often a major concern for people living with HIV (PLHIV) in rural areas where social control is strong. Therefore, village service models should not be exclusive to HIV but should be integrated with services for other chronic diseases, such as diabetes and hypertension. By integrating HIV services into the management of non-communicable diseases (NCDs), patient confidentiality can be better maintained, and social stigma can be minimized. This is what is known as an integrated service approach that adapts to the socio-cultural context of rural Indonesia.

The implementation of this decentralization also requires changes in village health funding patterns. Village funds, which have been primarily allocated for physical infrastructure, must be shifted to support the operations of health cadres and the procurement of basic health equipment at Community Health Centers. National regulations, through the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration, need to provide clear direction so that the management of chronic infectious diseases is a priority for the use of village funds. Without financial support

at the grassroots level, the decentralization model will only place an additional burden on healthcare workers in the field without achieving optimal results.

Furthermore, this decentralization model must be supported by an efficient referral system. Patients in unstable conditions should still receive care at the hospital level, but once their clinical condition improves and the virus is suppressed (U=U), routine monitoring should be returned to the village level. A "two-way communication" system between specialist doctors in cities and midwives in villages through a digital platform will ensure that patients continue to receive expert care standards even when they are far from the city center. Decentralization does not mean lowering quality standards, but rather bringing them closer to those who need them most.

Strategically, this decentralization of services will also reduce overcapacity at referral hospitals. By shifting stable patients to the village level, hospitals can focus more on managing complications and developing clinical research. This creates systemic efficiencies in overall public health governance. This transformation will require significant initial investment in training and standardization, but the long-term savings from reduced mortality and prevention of new infections will yield invaluable social returns to the nation.

6.1.2 Geographic Justice in John Rawls' Perspective

To provide a strong philosophical foundation for this policy transformation, we can refer to John Rawls's Theory of Justice. One of Rawls's key principles is the "Difference Principle," which states that social and economic inequalities should be arranged in such a way as to provide the greatest benefit to the least advantaged members of society. In the context of health in Indonesia, people living in remote, island, and border areas are among the most geographically disadvantaged. Therefore, an equitable health policy is one that deliberately allocates greater resources to these areas to compensate for the natural barriers they face (Rawls, 2021).

Applying Rawls's principle to HIV policy means that governments should not use "population efficiency" or "economies of scale" as the primary basis for budget

allocation. If we only locate services in densely populated areas of Java because they cost less per patient, we are perpetuating systemic injustice. Geographical justice demands that the significantly higher per-patient costs in the interior of Papua or remote areas of Maluku (due to logistics and transportation costs) remain fully borne by the state as a form of compensation for their spatial disadvantage. This is the essence of the state's moral obligation to guarantee the right to equal health for all citizens.

This philosophy of justice must be translated into key performance indicators for policymakers. The success of the health minister or head of the health office should not be measured solely by national averages, as averages often conceal disparities beneath. Indicators of success must be based on achievements in the most challenging areas. If the 95-95-95 target is achieved in Jakarta but only 30% in Papua, then the policy is considered a moral failure from a Rawlsian perspective of justice. Policy transformation based on geographic justice is an effort to ensure that a person's place of birth does not become a death sentence for their future health.

In addition to the Difference Principle, Rawls also emphasized the importance of "Fair Equality of Opportunity." In the context of HIV, this means that every individual should have equal access to the best information, diagnostics, and treatment, regardless of economic background or location. Current geographic disparities in Indonesia fundamentally deprive people living with HIV in remote areas of the opportunity to live productive and healthy lives. Without asymmetric policy interventions—where disadvantaged areas receive extra attention—this gap will continue to widen as advances in medical technology tend to be enjoyed only by urban populations.

Therefore, policy reorientation must include a more equitable redistribution of skilled healthcare professionals. Using Rawls's framework, the government has the moral legitimacy to mandate the placement of specialists in underserved areas, as long as their professional rights and welfare are specifically guaranteed. The "Health Human Resources Affirmation" policy is not merely an administrative matter, but also a matter of upholding justice for citizens who have been neglected. This book argues that without a philosophical paradigm shift from efficiency to justice, disease elimination targets will consistently hit the same wall of disparity.

This inequality must also be viewed through an intersectional lens, where geographic barriers are often intertwined with poverty and social marginalization. A woman living with HIV in a remote village faces a far greater burden than a man living with HIV in a large city. Inclusive policies must address the intersection of these vulnerabilities. Thus, policy transformation based on geographic equity is a major project of decolonizing our health system from the urban bias that has long dominated our technocratic thinking. This is the path to a more just and resilient Indonesia in the future.

6.2 Digitalization of Remote Monitoring and Service Systems

Healthcare digitalization has become inevitable in the era of the 4.0 industrial revolution, and for HIV/AIDS prevention, it offers significant opportunities to overcome physical and social barriers. The use of telemedicine and mHealth (mobile health) is no longer merely a complement, but a core component of future health policy architecture. Remote services enable people living with HIV to consult with specialists without having to travel long distances, while providing an additional layer of much-needed privacy for those who fear stigma in physical healthcare facilities. Digitalization serves as a virtual bridge connecting medical expertise in urban centers with the needs of patients in remote areas (World Health Organization, 2024).

Integrated digital platforms such as SATUSEHAT, developed by the Ministry of Health, are a crucial foundation for continuity of care. With nationally accessible electronic medical records, people living with HIV—such as migrant workers or seafarers—can continue their treatment anywhere without having to repeat the administrative process from the beginning. Digitalization also enables real-time monitoring of ARV drug stocks down to the smallest service level, allowing for early detection and anticipation of stockouts, which frequently occur in island regions, through automated warning systems.

Beyond logistical efficiency, digitalization also plays a crucial role in patient empowerment. mHealth applications that provide pill reminders, nutritional information, and laboratory result tracking (such as CD4 counts and viral load) give

people living with HIV greater agency in managing their own health. Patients are no longer passive objects of the health system but rather active subjects with access to their own health data. This digital transformation also indirectly educates the public about health literacy, a crucial factor in the success of long-term therapy.

However, the success of digitalizing HIV services depends heavily on data security and privacy. Given the sensitivity of HIV status, digital data leaks can have a devastating impact on patients' social and work lives. Therefore, digitalization policies must be accompanied by strengthened regulations on personal data protection and the use of high-level encryption technology. Patient trust in digital systems is a key asset; Without absolute privacy guarantees, no matter how sophisticated digital innovations are, they will not be adopted by the PLHIV community.

6.2.1 mHealth for Treatment Retention

One of the biggest challenges in HIV management is patient retention. Loss to follow-up often occurs because patients feel well after several months of therapy, or, conversely, become discouraged by poorly explained drug side effects. This is where mHealth interventions play a vital role. Through personalized automated messaging services (SMS or instant messaging apps), healthcare providers can efficiently provide ongoing psychosocial support and education. Studies show that structured use of mHealth can increase treatment adherence by 20-30% in resource-limited areas (UNAIDS, 2024).

In Indonesia, mHealth can also be utilized to facilitate virtual Peer Support Groups (PSGs). For people living with HIV in remote areas who lack physical access to PSGs, online forums moderated by trained counselors can provide a sense of community and reduce social isolation. These virtual PSGs provide a space for sharing coping strategies for dealing with drug side effects or environmental stigma. National policies should actively encourage the integration of mHealth into minimum service standards in every PDP (Treatment Support Care) service, not just as a voluntary initiative, but as a mandatory protocol in chronic patient management.

6.2.2 The Challenge of the Digital Divide in Remote, Border, and Island Regions

Despite the enormous potential of digitalization, we must not turn a blind eye to the reality of the still-widening digital divide in Indonesia. In remote, border, and island regions (DTPK), internet infrastructure is often unstable or even non-existent. Furthermore, the low level of digital literacy and smartphone ownership among people living with HIV from lower economic classes remains a significant barrier. If not carefully managed, digitalization could create new forms of inequity, leaving the poor and geographically isolated even further behind in healthcare advancements (BPS, 2025).

An inclusive digital transformation strategy must include investment in telecommunications infrastructure in peripheral areas, for example, through the provision of satellite connectivity (such as Starlink or VSAT) in remote community health centers (Puskesmas). The government should also consider data subsidy schemes or the provision of affordable devices for people living with HIV from low-income families as part of the healthcare package. Digitalization should not completely replace physical services, but rather serve as a reinforcement. In areas with low connectivity, a "hybrid" service model—combining physical visits by village cadres with remote consultations via radio or simple SMS—must be maintained.

Addressing the digital divide also involves educating local health workers. Often, it's not just patients who are technologically challenged, but also nurses and administrators at community health centers (Puskesmas). Digital literacy training for frontline health workers is essential for the successful implementation of the SATUSEHAT platform or other mHealth applications. Digital transformation is a change in work culture, not simply the installation of software. Without the readiness of the people behind it, technology will be a powerless artifact in tackling the HIV pandemic.

In conclusion, the digitization of remote monitoring and service systems is a powerful instrument for realizing adaptive and inclusive policies. It can transcend geographical barriers and break down barriers of social stigma. However, it must be

implemented with full awareness of equitable access, data security, and humanitarian sensitivity. This book emphasizes that the future of HIV-AIDS prevention in Indonesia lies in a smart synthesis of the physical proximity of village-level services with the speed of virtual access through digital technology. Only in this way can we ensure that every PLHIV, wherever they are, has an equal opportunity to live a healthy, dignified, and productive life.

6.3 Crisis Mitigation Policy and Health System Resilience

The global experience of dealing with the COVID-19 pandemic has provided valuable lessons regarding the vulnerability of health systems to external shocks. For communities living with HIV (PLHIV), a health crisis is not just an additional biological threat, but also a threat to survival due to the disruption of access to routine services. Future HIV response policies must include a robust crisis mitigation component to ensure system resilience. Resilience, in this context, is defined as the ability of a health system to continue providing essential services—such as ARV distribution and clinical monitoring—during emergencies, whether pandemics, natural disasters, or socio-economic crises (Adisasmito, 2024).

Adaptive crisis mitigation strategies should include an "HIV Emergency Services" protocol that automatically activates when a state of emergency is declared. This protocol involves expanding the Multi-Month Dispensing (MMD) policy to provide six months of medication, utilizing alternative logistics channels, and activating a network of community volunteers as backup drug couriers. Furthermore, health system resilience requires flexibility in regional budgeting. Regional governments must have emergency health funds that can be allocated quickly to prevent shortages of medication and personal protective equipment for frontline workers. Crisis mitigation is not just a matter of medical technicalities, but also a matter of bureaucratic readiness to respond quickly and effectively to unexpected situations.

Building resilience also means strengthening the mental and physical capacity of health workers. In crises, the workload of HIV workers often doubles as they are also involved in other emergency response activities. Mitigation policies must ensure the

protection of these workers, both through job security and adequate psychosocial support. With a resilient health system, the HIV elimination target will remain stable despite the challenges of future crises. This book emphasizes that building resilience is a long-term investment to protect decades of progress in epidemic control.

6.4 Big Data-Driven Service Integration Strategy

The future of responsive public health governance lies in the country's ability to manage and integrate large-scale data (Big Data). Data-driven service integration strategies aim to create full visibility into each patient's health journey, from screening and therapy initiation to viral suppression. In Indonesia, the SATUSEHAT platform is a milestone in this transformation. Cross-sectoral data integration—between clinical data from community health centers, JKN membership data from the Healthcare Social Security Agency, and population data from Dukcapil (Civil Registration Agency)—enables more precise and personalized interventions. For example, the system can provide early warnings to caregivers if a patient has not yet collected medication at any health facility across Indonesia (Lestari et al., 2025).

The use of artificial intelligence (AI) in HIV data analysis also offers the opportunity to map new transmission hotspots more accurately based on population mobility patterns and social behavior. However, this strategy must be implemented with the strictest data ethics standards. Transparency regarding how data is used, who has access, and how the privacy of people living with HIV is protected must be part of national policy documents. Without community trust that their data is secure, data integration efforts will only fuel resistance and drive patients away from digital services. Innovative governance is about using technological advancements to enhance human dignity, not to surveil or discriminate.

6.5 Final Conclusion: HIV-AIDS Policy Reform Agenda

To conclude this comprehensive analysis, this book formulates an agenda for reforming Indonesia's HIV-AIDS response policy for the 2026-2030 period. This agenda is based on three main pillars: Humanity, Geographic Justice, and System Independence. First, reform must place the dignity of people living with HIV at the

center of all policies. This means eliminating all forms of internal stigma in health facilities and strengthening legal protection for marginalized groups. Second, the implementation of asymmetric policies that provide real affirmation for underdeveloped, border, and island regions to ensure equal access regardless of distance. Third, the transition to stable financial independence through full integration into the National Health Insurance system and optimization of regional budgets (Pradana & Wijaya, 2024).

This book has demonstrated that the challenge of HIV response in Indonesia is no longer simply a drug shortage, but rather a problem of structural failure and deep disparities. Rethinking policy means boldly dismantling urban bias, addressing human resource exhaustion, and breaking down the economic barriers that prevent the poor from achieving health. Eliminating HIV by 2030 is not just a statistical target, but a promise of social justice for all Indonesians. Through genuine multisectoral collaboration and bold leadership, we can realize a future where no more lives are lost due to ignorance, poverty, or geographic barriers. This is a historic call for all of us—academics, practitioners, and policymakers—to act now for a future generation free from AIDS and filled with hope.

CHAPTER 7: LONG-TERM IMPACT OF HIV ON NATIONAL RESILIENCE AND THE DEMOGRAPHIC BONUS

7.1 HIV and the Threat to Demographic Bonus Productivity 2030-2045

Indonesia is currently experiencing a crucial period of demographic transition known as the "Demographic Bonus," where the productive-age population (15-64 years old) far exceeds the non-productive-age population. This period is projected to peak between 2030 and 2045. Theoretically, the demographic bonus represents a golden opportunity to accelerate national economic growth through increased public savings and labor productivity. However, this potential is seriously threatened if the health of the productive-age population is not maintained, particularly from the burden of chronic infectious diseases such as HIV/AIDS. As discussed in previous chapters, the majority of new HIV infections in Indonesia occur in the 15-49 age group—the core of the national workforce (Ministry of Health of the Republic of Indonesia, 2024).

HIV's threat to the demographic bonus operates through the weakening of human capital. When a productive-age worker becomes infected and lacks access to equitable or quality treatment, their productivity declines due to frequent illnesses or the emergence of opportunistic infections. At a macro level, if HIV prevalence continues to rise among those of productive age without adaptive policy mitigation, Indonesia risks losing significant potential GDP growth. This economic burden stems not only from the loss of individual income but also from increased economic dependency within families, where healthy family members must leave work to care for sick people living with HIV. This phenomenon could reverse the benefits of the demographic bonus into a "demographic burden" that cripples national economic resilience.

Analysis of national resilience shows that public health is the foundation of national stability. HIV affecting the workforce, including security personnel (TNI/Polri) and key professionals, can weaken the state's vital functions. Policy reorientation must view HIV

prevention as an integral part of a non-military defense strategy. National resilience will be fragile if young people, who should be the driving force of the economy, are instead trapped in a cycle of disease and poverty due to stigma and discrimination. Therefore, investing in reproductive health and HIV prevention at the school and university levels is a strategic step to secure the quality of Indonesia's human resources towards 2045 (Bappenas, 2023).

Furthermore, we must consider the collective psychosocial impact. The demographic bonus demands innovation and creativity. However, a discriminatory social environment against people living with HIV creates an atmosphere of fear that hinders individuals' full participation in the formal economy. Policy transformation must create a safe and inclusive work environment so that people living with HIV can remain productive and contribute optimally. Without protecting employment rights for people living with HIV, the state is deliberately wasting valuable human capital. Responsive public health policies must shift the narrative from "disease management" to "securing the nation's human capital."

The correlation between HIV and the demographic dividend must also be seen in the context of education. Children born to mothers with HIV or who have lost a parent to AIDS face greater barriers to development and access to education. If this issue is not addressed through comprehensive mother-to-child transmission (PMTCT) programs, we will pass on a health burden to future generations. Failure to prevent new infections in infants means creating a long-term dependency burden that could have been prevented. Geographic equity in PMTCT services across Indonesia is key to ensuring that the demographic dividend is not eroded by the burden of infectious diseases from an early age.

The author argues that indicators of successful HIV response must be incorporated into the 2025-2045 National Long-Term Development Plan (RPJPN). This is crucial to ensure synchronization between the health, education, and labor sectors. We cannot expect 6-7% annual economic growth if our workforce is plagued by an uncontrolled epidemic. Integrating health and labor data will provide a realistic picture of the economic risks we face. HIV response is a strategic investment to keep the demographic bonus window of opportunity wide open for Indonesia's future success.

7.2 Sustainable Health Financing: Investment vs. Burden Models

In the discourse of health economics, debates about budget allocation often become mired in the view that public health spending is a "cost" that reduces fiscal space for physical infrastructure development. However, in-depth Cost-Benefit Analysis shows that every rupiah invested in HIV prevention provides multiple social and economic returns in the long term. Sustainable health financing should be viewed as an "investment in human capital" that prevents catastrophic costs and lost productivity in the future. Failure to invest now in prevention will lead to an explosion in the cost of much more expensive advanced treatment in the future (Siregar et al., 2023).

A sustainable financing model demands a shift from dependence on international donors to domestic self-sufficiency. Currently, the National Health Insurance scheme covers medical costs, but gaps remain in funding for preventive activities and community support, which have been dominated by grants. Policy transformation must encourage "resilient health fiscal" at the regional level. This means that regional governments must be self-sufficient in funding HIV services without having to rely on central or international funding. This requires reforms to the central government's transfer system to regional governments (such as the Non-Fiscal Special Allocation Fund) to make it more flexible in responding to dynamic needs on the ground.

Analysis of Disability-Adjusted Life Years (DALYs) lost due to HIV in Indonesia shows significant figures. High DALYs mean years of healthy, productive life lost. By increasing investment in universal access to ARVs and early case detection, we effectively "buy back" these productive years. Investment in digital information systems (such as SATUSEHAT) also contributes to cost efficiency, as it reduces duplication of services and prevents drug waste due to poor stock management. Sustainable financing is not just about making money, but about ensuring every rupiah is used accountably and has maximum impact on public health.

Furthermore, innovative financing models such as Social Impact Bonds or strategic partnerships with the private insurance sector for chronic disease coverage need to be developed. The private sector has a direct stake in maintaining the health of its employees,

making their contribution to funding workplace prevention programs economically rational. Responsive governance must be able to bridge these various funding sources into a single, transparent national coordination platform. Fiscal sustainability is a prerequisite for achieving HIV elimination by 2030, where the country will no longer rely on donor generosity but will instead stand firmly based on its national resource independence.

It is also important to highlight the cost of inaction. If Indonesia does not drastically increase treatment and prevention coverage today, projections indicate that the cost of treating opportunistic infections and AIDS complications will triple by 2040. This will overburden the National Health Insurance scheme and threaten the sustainability of the national health insurance system as a whole. Therefore, a "front-loading" policy, or increased upfront investment to suppress the rate of new infections, is the most prudent economic strategy. We pay now for a healthier future, or we pay a much higher price in the future for our failures today.

The independence of the financing system also includes strengthening the domestic pharmaceutical industry. Dependence on imported raw materials (BBO) for ARVs causes drug prices to fluctuate according to currency exchange rates. National policy must provide incentives for the domestic pharmaceutical industry to independently produce first- and second-line ARVs. With drug sovereignty, medical costs can be reduced, and supply stability can be ensured throughout the archipelago. This is the essence of sustainable health financing: the integration of fiscal, industrial, and public health policies toward a single goal: health equity for all.

7.3 Technical Recommendations for the Regulatory Framework

As part of the substantive solution, this book offers technical recommendations in the form of a draft model regulatory framework that can be adopted by local governments (districts/cities) to achieve inclusive and adaptive HIV governance. Regulations at the local level often present obstacles due to their overlapping or even discriminatory content. These recommendations are based on the principles of human rights, geographic equity, and bureaucratic efficiency discussed in previous chapters.

Model Inclusive Local Regulation for HIV Response

An effective local regulation on HIV must contain the following key elements:

- Privacy and Anti-Discrimination Guarantees: A strict prohibition against termination of employment, eviction from housing, or denial of educational services based on HIV status. The regulation must include administrative and legal sanctions for violators.
- Mandatory Budget Allocation: A mandate for local governments to allocate a minimum of 5-10% of their local health budget to preventive programs and psychosocial support for people living with HIV, excluding personnel expenses.
- Recognition of Community-Based Services: Legitimize the role of NGOs and Peer Support Groups (PSGs) as official government partners in the referral and outreach system, including funding mechanisms through grants or self-management.
- Integration of Primary Services: Obligation for every Community Health Center (Puskesmas) to provide Voluntary Counseling and Testing (KTS) and Employer-Initiated HIV Testing (TIPK) services to patient-friendly standards.

Technical Guidelines for Multi-Month Dispensing (MMD) Implementation in the Archipelago

Given significant geographic barriers, the MMD policy must be implemented with strict yet flexible technical protocols:

- Patient Criteria: MMD for 3-6 months is given to patients who have been stable on treatment for at least 6 months, have medication adherence above 95%, and do not have active opportunistic infections.

- Community Health Center (Pustu) Logistics System: Medication is delivered to the nearest Sub-Community Health Center (Pustu) through an integrated delivery service or certified community courier, to reduce the burden of travel costs for patients to the district center.

- Remote Monitoring: Use of mHealth (SMS/WhatsApp) to verify weekly medication consumption and schedule quarterly telemedicine consultations as a requirement for MMD renewal.

- Dynamic Stock Management: A digital early warning system connected to the provincial pharmacy warehouse ensures MMD stock is always available at least two months before the patient's medication expires.

Viral Load (VL) Laboratory Deconcentration Strategy

To address geographic disparities in clinical monitoring, a roadmap for the deconcentration of diagnostic technology is needed:

- Placement of POCT (Point-of-Care Testing) Machines: Prioritize the placement of portable VL devices in Type C Regional Public Hospitals and referral community health centers (Puskesmas) in Remote, Border, and Island Regions (DTPK).

- Integrated Specimen Logistics System: Collaborate with local airlines and port authorities to prioritize the delivery of medical samples as "essential cargo" with state-subsidized costs.

- Digitization of Lab Results: VL test results must be directly integrated into the SATUSEHAT application so that patients and doctors in villages can view results in real time without having to wait for physical files to be delivered.

These technical recommendations are not merely administrative drafts, but rather a manifestation of spatial equity. With clear technical guidelines, healthcare workers in remote areas have the legal and operational basis to implement life-saving innovations. Policies must no longer be vague; they must be operational, measurable, and prioritized for the most difficult-to-reach. This is the essence of responsive governance in facing the challenges of HIV in the era of national health transformation.

In closing this technical chapter, it is essential to emphasize that regulations are merely pieces of paper unless accompanied by a change in bureaucratic culture. Civil servants in the health sector must embrace empathy as a core value in implementing these regulations. These technical recommendations are designed to simplify the work of officials, not increase administrative burdens. By simplifying referral procedures and expanding access to medicines, we are actually building public trust in the government.

The successful implementation of these regulations also depends heavily on the active participation of people living with HIV (PLHIV) in the monitoring process. Every policy must have a feedback mechanism that allows patients to report any malpractice or discrimination.

This way, our health system will continuously learn and adapt (a self-correcting system). The journey towards HIV elimination by 2030 is indeed fraught with challenges. Still, with an inclusive, adaptive, and geographically equitable regulatory framework, Indonesia can stand tall as a global model in addressing the epidemic amidst diverse and complex geographic challenges.

CHAPTER 8: DIMENSIONS OF ETHICS, HUMAN RIGHTS, AND PUBLIC COMMUNICATION

8.1 Ethics and Human Rights in HIV Services

Public health policies often find themselves at a delicate crossroads between protecting the health of the broader population and respecting the human rights and autonomy of individuals. In the context of HIV/AIDS in Indonesia, ethical and human rights dimensions are not merely normative complements but prerequisites for the effectiveness of the policy itself. History shows that coercive, discriminatory, or privacy-violating approaches will actually drive individuals away from healthcare services, ultimately exacerbating the spread of the virus. Therefore, responsive governance must be rooted in the principles of bioethics: beneficence, non-maleficence, autonomy (respect for patient choice), and justice (Beauchamp & Childress, 2023).

The principle of non-discrimination is a key pillar of human rights in HIV care. In Indonesia, ethical challenges arise when strong social stigma permeates institutional policies. For example, mandating HIV testing for prospective brides or workers without guarantees of confidentiality and psychosocial support constitutes a serious ethical violation. Such policies are often based on good intentions for prevention, but without a framework that protects individual rights, they become tools of exclusion. Public health ethics demand that all medical interventions be carried out based on informed consent. This ensures that patients are active subjects who understand the medical and social consequences of their health status.

Distributive justice in the distribution of health resources is also a profound ethical issue in Indonesia. As discussed in the chapter on geographic disparities, when a state fails to provide equal access to citizens in remote areas, it is violating the right to health. Ethically, a person's economic status or geographic location should not determine whether they deserve to live or die. The right to health is an absolute and non-derogable human right. Therefore, transforming policies toward geographic justice is an effort to fulfill the state's moral and constitutional obligations to its citizens.

Another ethical challenge concerns data confidentiality in the digital age. The use of Big Data platforms like SATUSEHAT offers efficiency but also carries the risk of large-scale privacy violations. Ethically, patient data belongs to the patient, and the state acts as a responsible data steward. Leaking HIV status data is not merely a technical issue, but a humanitarian disaster that can destroy an individual's career and social life. Personal data protection regulations must be implemented with the highest ethical standards, ensuring that the use of digital technology is truly for the benefit of the patient (patient's best interest) and not for punitive surveillance (UNAIDS, 2024).

Beyond data protection, ethical aspects also encompass healthcare professionals' treatment of key population groups. Internal stigmatization by healthcare professionals, such as the use of derogatory terms or refusal of medical treatment, is a serious violation of the professional code of ethics. Reorientation of human resource policies should incorporate bioethics and human rights sensitivity education as core components of medical and nursing curricula. Healthcare professionals must understand that their duty is to provide care without moral judgment. Medical professionalism is tested by the ability of healthcare professionals to show equal empathy to every human being, regardless of their background.

Finally, legal protection for people living with HIV from discrimination in the workplace and social environment is a manifestation of upholding human rights. National policies must be able to impose strict sanctions on institutions that engage in discrimination. This protection provides a sense of security for people living with HIV (PLHIV) to continue contributing to national development. By integrating ethical and human rights values into every policy, we are not only building an efficient health system but also a national civilization that respects human dignity. Ethics is the soul of public health policy; without it, policy is merely a collection of cold, lifeless technical procedures.

8.2 Public Communication Strategy for National De-stigma

Stigma is an invisible barrier that hinders the effectiveness of all HIV medical interventions in Indonesia. To break down this barrier, a massive, structured, and transformative public communication strategy is needed. Health communication should

no longer be instructive and paternalistic ("do this, don't that"), but rather dialogic and empathetic. A national de-stigma communication strategy aims to shift society's collective narrative about HIV: from one of fear and judgment to one of understanding and support. The key is normalizing HIV as a manageable chronic disease, similar to diabetes or hypertension, so that those with HIV can continue to live productive and healthy lives (World Health Organization, 2024).

Changing terminology is a crucial first step in public communication. The use of the term "sufferer" must be completely replaced with "People Living with HIV" (PLHIV) to give agency and dignity to the subjects. Words have the power to construct reality; the term "sufferer" assumes powerlessness, while "PLHIV" emphasizes the identity of a person managing their health condition. Furthermore, public campaigns must aggressively promote the latest science on "U=U" (Undetectable = Untransmittable). When the public understands that people living with HIV who regularly take their medication will not transmit the virus, irrational fears will disappear, and inclusive social interactions can be reestablished.

In the digital age, social media has become a key battleground for combating misinformation and stigma. Communication strategies must leverage influencers, religious leaders, and public figures to spread messages of inclusivity. Campaigns based on true stories (storytelling) about the success of people living with HIV in their careers and families have proven far more effective in changing public perceptions than dry statistical presentations. Creative content in the form of short videos, infographics, and testimonials must be designed with a modern aesthetic to appeal to the younger generation, a group at significant risk of new infections but also possessing the potential to be agents of social change.

However, public communication strategies must also be wary of "echo chambers" on social media. Often, correct information circulates only among those already exposed, while conservative groups maintain old prejudices. Therefore, collaboration with religious leaders and local community leaders is crucial for implementing "values-based health literacy." Explaining HIV from the perspective of humanity and compassion taught by religion can break down cultural resistance that has hindered prevention education. Successful public communication is communication that bridges health science with local sociocultural wisdom.

In addition to external campaigns, internal communication within government and healthcare facilities also needs to be improved. Stigmatization often begins with

how healthcare workers communicate with patients. Therapeutic communication training based on Non-Violent Communication (NVC) should be mandatory for all frontline healthcare workers. Staff must be able to listen without judgment and provide information without intimidation. Supportive communication within community health centers will create a positive domino effect: patients feel comfortable, their compliance increases, and they become "health ambassadors" who spread positive experiences to their communities.

The authors recommend the formation of a "National De-stigma Communication Task Force" involving experts in sociology, psychology, and communications, as well as representatives from the PLHIV community. This task force is tasked with monitoring media narratives and providing swift clarification on circulating stigmatizing news or medical hoaxes. Health literacy education must begin early through a comprehensive school curriculum, teaching empathy and a sound biological understanding of HIV. By building a foundation of healthy communication, we are preparing a more mature Indonesian society to face future public health challenges. De-stigmatization is not solely the responsibility of health professionals, but the collective responsibility of all the nation's communicators.

CHAPTER 9: STRATEGIC SYNTHESIS AND POLICY RECOMMENDATIONS

9.1 Executive Summary for Policy Makers

This reference book has deeply examined the various barriers to HIV/AIDS management in Indonesia, ranging from the human resource crisis and economic inequality to geographic disparities. Finally, this chapter presents an executive summary aimed at policymakers at the national and regional levels as a basis for developing future health Strategic Plans (Renstra). These recommendations are designed to address real challenges on the ground through a systematic, logical, and evidence-based approach. The ultimate goal is to achieve the 2030 HIV elimination target in a just, inclusive, and sustainable manner. HIV management should no longer be viewed as an isolated health issue, but rather as an integral part of Indonesia's human capital development toward the vision of a Golden Indonesia 2045 (Ministry of Health, 2024).

Priority 1: Health Human Resource Management Reform

The maldistribution of skilled health workers and the phenomenon of burnout among frontline workers are the main bottlenecks hampering the acceleration of HIV management in Indonesia. Currently, internal medicine specialists and infection consultants remain heavily concentrated on Java, while peripheral regions are experiencing acute shortages. The government must immediately implement asymmetric policies by providing significant special incentives, both financial and accelerated career development pathways, for healthcare workers willing to serve in Remote, Border, and Island Areas (DTPK). This policy should not be merely voluntary but should be integrated into a mandatory specialist work system accompanied by strong legal protection (Mahendradhata et al., 2021).

In addition to incentives, protecting the mental health of healthcare workers must be a regulatory priority. The high rate of burnout in HIV care is often overlooked as a normal occupational hazard. However, emotional exhaustion directly impacts staff's empathy and increases stigma against patients. National policy needs to mandate

psychosocial support programs and work systems that facilitate mental recovery for frontline workers. Human resource reform is not just about the number of individuals deployed, but also about nurturing the humanity of healthcare providers so they can remain a beacon of hope for patients amidst the darkness of stigma.

Task-shifting and task-sharing strategies must be immediately legalized through regulations that go beyond mere technical guidelines, namely through a Ministerial Regulation of Health that provides definitive legal protection. In the face of a doctor shortage in remote areas, certified nurses and midwives must be authorized to initiate antiretroviral (ARV) treatment in uncomplicated cases. This legality is crucial to ensure that healthcare workers in the field do not fear legal action when performing actions that are truly necessary to save patients' lives. Global experience shows that measured and supervised delegation of tasks can drastically increase treatment coverage in areas with limited resources (World Health Organization, 2023).

Beyond clinical aspects, integrating bioethics and human rights sensitivity education into medical and nursing curricula is a long-term step towards eliminating internal stigma in healthcare facilities. Our medical education has focused too much on biological pathology and overlooked the sociological dimensions of disease. Every healthcare worker must graduate with an understanding that patient dignity is absolute, regardless of their social background or behavior. Eliminating stigma at home—in hospitals and community health centers—is a prerequisite for building public trust in our healthcare system. Holistic human resource reform is key to breaking down barriers to HIV services.

Priority 2: Mitigating Economic and Social Barriers

Health is inseparable from economic well-being. HIV treatment failure in Indonesia is often not due to a lack of medication, but rather to patients' economic inability to afford it. The government needs to integrate HIV services into a broader and more adaptive social safety net. This could include direct transportation subsidy schemes or nutrition vouchers for people living with HIV (PLHIV) from the lowest economic quintile. Transportation costs to health facilities are often a catastrophic burden for poor families, forcing them to choose between buying food and continuing

treatment. This safety net must be managed transparently and integrated with national poverty data (Siregar et al., 2022).

Economic mitigation also means ensuring that people living with HIV do not lose their livelihoods due to their health status. At the legislative level, strengthening and enforcing anti-discrimination laws in the workplace must be a priority. Companies, both state-owned and private, should be prohibited from requiring HIV testing as a recruitment requirement or from unilaterally terminating employment based on HIV status. Strict law enforcement against discriminatory practices will provide economic security for people living with HIV, which in turn will increase their self-esteem and adherence to treatment. When people living with HIV remain productive, they are no longer a burden to the state, but rather a development asset that contributes to national economic growth.

Investing in HIV prevention and early treatment today is actually a fiscal efficiency strategy for the future. Policymakers must understand that the cost of treating a single case of advanced HIV accompanied by opportunistic infections is far more expensive—can be tens of times higher—than the cost of routine maintenance with ARVs. By strengthening prevention and early detection services, we are effectively saving the National Health Insurance system from potential bankruptcy due to catastrophic costs in the future. Cost-benefit analysis shows that every rupiah invested in HIV prevention provides a very high social return in the form of maintained productivity (World Bank, 2024).

Furthermore, social assistance schemes for people living with HIV must include protection for the families left behind, especially children. The risk of intergenerational poverty is very real for families affected by HIV. Therefore, educational scholarships and nutritional support for children from families living with HIV must be part of an inclusive policy package. Mitigating economic barriers is a concrete manifestation of the state's presence in protecting its most vulnerable citizens. By alleviating anxiety about daily survival, we free up space for patients to focus on their health recovery. This is the essence of socially just health development for all Indonesians.

Priority 3: Accelerating Geographic Equity and Digital Transformation

The government must have a strong political will to break down the "access caste" of healthcare services that currently divides Indonesia between the central region (Java-Bali) and the periphery. Geographical equity demands that every citizen have an equal chance in life, regardless of where they were born. The development of laboratory infrastructure for viral load (VL) and CD4 cell testing must be massively expanded in Eastern Indonesia and island regions. We can no longer rely on a system of sending blood samples across islands that is time-consuming and carries a high risk of specimen damage. The future solution lies in decentralizing diagnostic technology (Ministry of Health of the Republic of Indonesia, 2024).

The use of portable and easy-to-operate Point-of-Care Testing (POCT) technology must become standard practice in community health centers (Puskesmas) in remote areas. With POCT, viral load test results can be known quickly, allowing doctors to make immediate clinical decisions without having to wait weeks. Although the per-unit cost of POCT equipment may be higher, the savings generated from logistical efficiencies and accelerated patient care will be far greater overall. This technological transformation is a form of diagnostic sovereignty that must be realized to protect residents in border areas and outermost islands.

Digital transformation through the SATU SEHAT platform must be maximized as a bridge to address disparities in access. Integrated electronic medical records enable highly mobile people living with HIV—such as migrant workers or seafarers—to continue receiving ongoing treatment wherever they are by simply showing their digital ID. Digitization must also target the drug logistics management system to prevent stockouts in remote community health centers. A digital early warning system will notify provincial health offices when drug stocks in an area are running low, allowing redistribution measures to be implemented before patients run out.

The use of telemedicine and mHealth is no longer merely an optional innovation, but an urgent necessity for reaching isolated areas. Remote services provide a safe and private space for patients who maintain strict confidentiality, while reducing their travel costs. However, this digital transformation must be accompanied by investment in internet infrastructure in DTPK areas to prevent a new digital divide. Geographic equity in the modern era means the availability of physical services in close

proximity and reliable digital connectivity. By uniting these two forces, we can ensure that the 2030 HIV elimination goal is achieved evenly from Sabang to Merauke.

Priority 4: Strengthening Decentralized Governance and Domestic Funding

The transition from reliance on international donors (such as the Global Fund) to stable domestic sources of funding is a challenge to health sovereignty that must be managed with a well-thought-out risk mitigation plan. The central government needs to establish a minimum percentage of the regional health budget (APBD) specifically for HIV prevention as part of compliance with Minimum Service Standards. Without a clear budgeting mandate, HIV programs in the regions are often a last-resort priority, easily cut during fiscal efficiencies. The leadership of regional heads is crucial for the sustainability of these services at the grassroots level (USAID, 2023).

Responsive governance demands robust multisectoral collaboration through the Pentahelix model. The private sector must be actively involved, not only through sporadic CSR programs, but also through the integration of HIV services into company clinics and private health insurance. By involving the industrial sector in workplace prevention and treatment, the burden on the public health system can be reduced. This collaboration also includes the role of academics in providing the latest research data to the government, as well as the role of the media in disseminating accurate and non-stigmatizing information to the public.

One transformative step in governance is fully legitimizing the role of Civil Society Organizations (NGOs) and Peer Support Groups (PSGs) in the formal health system. The implementation of "Type III Swakelola" (Swakelola Tipe III) service procurement mechanisms should be accelerated across all regions. This mechanism allows the government to contract community NGOs to perform outreach and mentoring tasks that cannot be performed by the community health center bureaucracy. NGOs' agility and emotional closeness to key populations make them the most effective spearheads in identifying hidden cases.

Accountability in budget management must also be improved through transparency of health spending data. Every rupiah spent must be accounted for in terms

of its effectiveness in reducing deaths and new infections. Clean and efficient governance will increase donor and public trust in the government's commitment. By strengthening bureaucratic structures and fiscal independence, Indonesia will have a resilient health system that is resilient to future shocks. Strong domestic funding is a symbol of a nation's sovereignty in protecting the health of its citizens independently and with dignity.

Priority 5: Public Communication and National De-stigma

The government must lead a radical national movement to change the public's perception of HIV/AIDS. Public communication strategies must no longer use fear-mongering narratives that only deepen stigma, but must shift toward an empowerment model based on the latest science. Mass promotion of the concept of Undetectable = Untransmittable (U=U) must be at the heart of the national campaign. The public needs to understand that people living with HIV who adhere to their medication until their virus is undetectable will not transmit the virus to others. This scientific knowledge is the most powerful weapon to eradicate prejudice and irrational fear (UNAIDS, 2024).

The elimination of stigmatizing and discriminatory terms in all state documents, regulations, and media campaigns must be implemented consistently and permanently. Language shapes social reality; the use of humanizing words will create a more inclusive environment. Furthermore, comprehensive reproductive health and HIV literacy education must be integrated into the school curriculum from an early age. The younger generation must be equipped with a sound biological understanding and empathetic values to prevent them from becoming perpetrators of stigma in the future. Education is the most effective primary prevention tool for breaking the chain of the epidemic and the chain of discrimination.

Final Conclusion: The 2030 Humanitarian Promise

The conclusion of this reference book affirms that the HIV response in Indonesia is a test of our nation's commitment to social justice and human integrity. We can no longer hide behind national averages, which often obscure the real suffering of people in remote areas or marginalized groups. Rethinking policy means boldly confronting the reality of inequality with policies that consciously support the most vulnerable. The target of eliminating HIV by 2030 is not merely a technocratic dream

or simply fulfilling a global commitment, but a humanitarian promise that we must fulfill together for the sake of justice for the Indonesian people.

The baton of this struggle now lies in the hands of our readers—academics who continue to research, practitioners who serve with their hearts, and policymakers who wield the power. Let every page of this book be a lasting reminder that behind every data, statistic, and chart, there is a priceless human life. Our struggle is a struggle to ensure that no citizen is left in the darkness of disease simply because of structural barriers that we should all be able to overcome. An AIDS-free Indonesia is a future where every individual can live a healthy, productive, and dignified life without fear. Good luck working for humanity; let history record our contributions to the nation's health.

CHAPTER 10: DIMENSIONS OF GLOBAL POLITICS AND HEALTH DIPLOMACY

10.1 Geopolitics of Health and Indonesia's Role in Global Architecture

The HIV-AIDS response in Indonesia cannot be separated from the highly complex dynamics of global health geopolitics. Since the pandemic began, the international response has shaped the way developing countries, including Indonesia, formulate their domestic policies. The current global health architecture is dominated by multilateral institutions such as the World Health Organization, UNAIDS, and funding agencies like the Global Fund. Indonesia's interactions with these institutions reflect a dynamic health diplomacy, in which the country seeks to balance adherence to global standards with protecting national interests. HIV-AIDS policy is not simply a clinical issue, but a diplomatic instrument used to demonstrate the country's commitment to human rights and the achievement of the Sustainable Development Goals (Mukti & Pradana, 2024).

From a geopolitical perspective, dependence on international funding often creates what is known as a "power asymmetry" in determining health priorities. For years, Indonesia's HIV response agenda has been heavily influenced by donor-defined indicators. However, as Indonesia's position in international forums such as the G20 and its ASEAN chairmanship strengthened, a paradigm shift toward "National Health Leadership" occurred. Indonesia began to emphasize the importance of health system resilience based on local context and data sovereignty. Responsive health diplomacy must be able to negotiate so that international assistance is not politically binding, but rather serves as a catalyst for strengthening a self-sufficient and sustainable domestic health system.

National policy reorientation must capitalize on Indonesia's strategic position as a bridge between developed and developing countries. Proactive health diplomacy allows Indonesia to access the latest medical technology innovations while maintaining control over the direction of its social policies. This is particularly important in addressing the HIV challenge, where technical solutions often have to contend with

unique sociocultural norms in Indonesia. By strengthening its role in health diplomacy, Indonesia becomes not only a recipient of global policy but also an active contributor in shaping a more equitable and inclusive global health narrative for archipelagic nations with high geographical complexity.

Critical analysis of global governance shows that the international response to HIV is often fragmented. Various global initiatives sometimes operate independently without strong coordination with national health systems. Indonesia, through the Ministry of Health and the Ministry of Foreign Affairs, has strived to synchronize health services through the "One-Stop" policy. Effective health diplomacy requires the bureaucracy to align global commitments (such as the UN Political Declaration on HIV/AIDS) with regional fiscal realities post-decentralization. This challenge is exacerbated in the post-COVID-19 pandemic era, where global funding priorities are shifting toward future pandemic preparedness, which risks diminishing attention to chronic infectious diseases like HIV.

Therefore, Indonesia needs to strengthen its "Health Diplomacy White Paper," which specifically addresses strategies for addressing the transition in donor funding. National independence does not mean isolation from the international community, but rather the ability to manage global partnerships as equals. Indonesia must demonstrate that domestic investment in HIV prevention is part of its contribution to global health security. By reducing prevalence rates and increasing domestic viral suppression, Indonesia directly helps prevent the emergence of drug-resistant viral variants, which could threaten global health stability. This is the essence of reciprocal and sustainable health diplomacy.

The implementation of health diplomacy also includes protecting Indonesian citizens (WNI) abroad, particularly migrant workers who are vulnerable to HIV. Many of our migrant workers work in countries with minimal health protection systems. Bilateral diplomacy must ensure that Indonesian citizens diagnosed with HIV abroad are not subjected to discriminatory treatment or forced deportation without proper medical referral. The integration of HIV services into cross-border labor cooperation agreements is a concrete example of a policy responsive to international population mobility. This demonstrates that Indonesian public health policy has an extraterritorial dimension that requires very close coordination between countries.

Furthermore, Indonesia can assume the role of a Center of Excellence for HIV prevention in the Asia-Pacific region. With Indonesia's success in integrating HIV services into the Universal Health Coverage scheme through the National Health Insurance, Indonesia has the opportunity to share its experiences with other developing countries. Health diplomacy through this technical cooperation channel will strengthen Indonesia's soft power on the global stage. In conclusion, health geopolitics must be managed intelligently so that every international interaction provides maximum benefits for the Indonesian people, especially those living with HIV, in the form of access to cheaper treatment, more advanced technology, and stronger human rights protections.

10.2 Challenges of Intellectual Property Rights (TRIPS) and Access to Generic Medicines

One of the biggest structural obstacles to global HIV elimination efforts is the Intellectual Property Rights (IPR) regime stipulated in the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement under the World Trade Organization (WTO). This agreement provides strict patent protection for multinational pharmaceutical companies, often making the latest ARV drugs prohibitively expensive and unaffordable for developing countries' health budgets. Indonesia, as a country with a significant HIV caseload, continues to face a dilemma between respecting international trade laws and the moral obligation to provide essential medicines to its citizens. This tension is at the heart of the political economy of health, which will significantly determine the future of epidemic control (World Trade Organization, 2025).

Patent barriers often delay the introduction of newer drug regimens with fewer side effects and greater efficacy, such as the integrase inhibitor class. While a drug is still under patent protection, local generic manufacturers cannot produce it freely, forcing the country to import branded drugs at many times the cost. Policy analysis shows that drug procurement costs absorb nearly 40-50% of the total national HIV budget. If these patent issues are not managed through intelligent legal and diplomatic strategies, the fiscal sustainability of the National Health Insurance (JKN) will be threatened, especially as the number of patients requiring second- and third-line

regimens continues to increase along with the increasing life expectancy of people living with HIV.

Indonesia has demonstrated political courage by utilizing the "TRIPS Flexibilities" mechanism, particularly through the Compulsory Licensing instrument. Through a Presidential Regulation, the government can grant permits to the domestic pharmaceutical industry to produce patented drugs for public health emergencies. This step represents a concrete manifestation of health sovereignty, where the right to life of citizens is placed above the commercial interests of multinational corporations. However, the use of compulsory licensing is often accompanied by diplomatic and economic pressure from the pharmaceutical companies' home countries. Therefore, drug access policies must be accompanied by strong trade diplomacy and solid international legal arguments to avoid adversely impacting the overall national investment climate.

In addition to compulsory licensing, Indonesia needs to strengthen negotiations through the Medicine Patent Pool (MPP), an international initiative that facilitates voluntary licensing for generic manufacturers in developing countries. By joining this voluntary licensing ecosystem, Indonesia can obtain technology transfer and early production rights for next-generation HIV drugs. Policy reorientation should encourage the national pharmaceutical industry, both state-owned and private, to increase research and development capacity to absorb this technology transfer. Drug sovereignty will not be achieved without the independence of the domestic pharmaceutical industry, capable of independently producing raw materials for pharmaceuticals (BBO), reducing dependence on imports, which currently stands at 90%.

The struggle for access to affordable drugs must also be carried out through regional collaboration within the ASEAN framework. With a single market and a large production base, ASEAN countries have stronger bargaining power in negotiating drug prices with global pharmaceutical companies (pooled procurement). This joint procurement strategy can significantly reduce drug prices through very large purchase volumes. Furthermore, harmonization of drug regulatory standards at the regional level will expedite the registration process for new generic drugs in Indonesia. This policy is a manifestation of pragmatic health diplomacy, transforming geographical and

administrative barriers into a collective force to ensure the availability of essential medicines for all people in the region.

Ethically, access to ARV drugs is part of the fulfillment of fundamental human rights. Pharmaceutical monopolies that ignore public health crises are a form of global injustice that must be combated with firm state policy. This book argues that Indonesia's health sovereignty is tested by its ability to navigate the complexities of international law to save the lives of its citizens. Policy transformation must ensure that no citizen loses their life due to unreasonable drug prices resulting from excessive patent protection. Enforcing health equity through generic drug policy reform is a crucial step toward national self-sufficiency in the health sector.

10.3 South-South Cooperation and Pharmaceutical Industry Independence

South-South and Triangular Cooperation (SSTC) is a strategic pillar for Indonesia in realizing a self-sufficient national health system. Amidst the disparity in access to technology between developed (North) and developing (South) countries, collaboration between developing countries offers more contextual, affordable, and equity-based solutions. In addressing HIV, Indonesia can learn much from the success of countries such as Brazil, Thailand, and South Africa, which have successfully developed strong domestic pharmaceutical industries and progressive drug access policies. This collaboration encompasses not only the drug trade but also the exchange of technical knowledge in program management, epidemiological surveillance, and community-based de-stigma strategies (Bappenas, 2025).

Implementing SSTC for Indonesia means positioning itself as a strategic partner in medical technology transfer. For example, Indonesia can collaborate with India in procuring generic pharmaceutical raw materials (BBO) at competitive prices, while simultaneously establishing domestic BBO production facilities through joint investment. The government's initiative to downstream the pharmaceutical industry must aim for self-sufficiency in the production of drugs for chronic infectious diseases. By having independent production capacity, Indonesia not only secures domestic supply but also has the potential to become an exporter of ARV drugs to neighboring

countries in the Pacific and Southeast Asia. This is a concrete step toward sustainable health sovereignty.

The independence of the pharmaceutical industry must also be supported by a national research policy oriented to the needs of the community. Universities and research institutions, such as the National Agency for Research and Innovation (BRIN), must be provided with adequate funding to conduct research into herbal or complementary medicines that can support the effectiveness of ARV therapy. Indonesia possesses extraordinary biological resources that have not been optimally utilized to support the health of people living with HIV (PLHIV), for example, in the development of nutritional supplements to boost the immune system. Integrating local wisdom and modern biotechnology through South-South cooperation will create unique and original Indonesian health solutions that do not rely entirely on innovation from developed countries.

Beyond technical aspects, SSTC is also a political instrument to strengthen the bargaining position of developing countries in international forums. By forming a solid bloc, countries of the South can push for reform of the global health architecture to make it more democratic and less dominated by the interests of a handful of wealthy nations. Indonesia has a leadership role to drive this agenda, ensuring that healthcare access is a global public good that must be available to everyone without exception. Health sovereignty does not mean isolating oneself, but rather building a network of equal cooperation, where each country strengthens the others without any single country dominating.

The transformation towards national pharmaceutical independence requires synergy between industrial, trade, and health policies. The government must provide fiscal incentives for pharmaceutical companies that conduct research and development domestically and use local raw materials. Furthermore, government procurement regulations (E-Catalog) must prioritize pharmaceutical products labeled with a high Domestic Component Level. By creating a secure domestic market, the national pharmaceutical industry will have the courage to make long-term investments. This independence is our primary defense against potential future disruptions to the global supply chain, such as those we experienced during the COVID-19 pandemic.

CHAPTER 11: THEORIES IN POLICY IMPLEMENTATION

11.1 PUBLIC POLICY

Public policy relates to various fields of science as public domains. One of the fields of science related to public policy is public health. In its development in the 19th century, public policy was used to discuss emerging social problems, which is considered the beginning of modern policy analysis (Parsons, 2014:94).

The health issue studied was the development of AIDS as a social problem by Anthony A. Vass (1986). Vass used the Fuller and Myers model to explore social/medical conditions. Although Vass felt the model was valid for studying AIDS, he raised several objections (Parsons, 2014:101).

Van Meter and Van Horn (1975) define public policy as actions undertaken by the public and private sectors, both individually and in groups, aimed at achieving the goals outlined in policy decisions. These actions are determined by policy decisions to transform decisions into operational actions in order to continue efforts to achieve major and minor changes within a certain period of time. George C. Edwards III and Ira Sharkansky in Suwitri (2008) state that public policy is a government action in the form of government programs to achieve goals or objectives. So public policy is "what is stated and done or not done by the government that can be determined in laws and regulations or in policy statements in the form of speeches and discourses expressed by political officials and government officials that are immediately followed up with government programs and actions." Then Gerston (2010 states that public policy is made and implemented at all levels of government, and the responsibilities of policymakers will differ at each level according to authority.

In this case, policy is the main decision, commitment, and action made by policyholders or authorized parties.

In addition, Gerston (2010) explains that policy is a combination of basic decisions, commitments, and actions made by influential holders, officials, or authorized parties. Thomas R. Dye, in Howlett and Ramesh (2005), states that public policy concerns "what government does, why they do it, and what differences it makes." This means that public policy is everything the government does, why they do it, and the differences it makes. Anderson states that public policy is a policy established by government agencies and officials. The policy has the following characteristics: it has a purpose, contains real actions not just hopes, may be positive or negative, and the policy is always stated in an authoritative regulation (Lubis, 2007). In addition, Birkland (2009) defines policy as "a statement by the government of what it intends to do, such as law, regulation, ruling, decision, order, or a combination of these." This means that policy is a statement from the government on what it intends to do, such as a law, regulation, decision, order, or a combination of these aspects. The phenomenon described above, based on several expert views on policy terminology appropriate to the context of HIV/AIDS control policy, is Brikland's opinion regarding the form of policy. In the context of HIV/AIDS control policy, policy decisions take the form of Presidential Regulations, Ministerial Regulations, Regional Government Regulations, and Mayoral Regulations. Based on these definitions, it can be concluded that public policy is directed at solving public problems, encompassing objectives, values, and implementation. Public policy is made by government agencies, not private entities, and public policy concerns actions taken or not taken by the government.

The characteristics of public policy are divided into four categories according to Anderson, J.E., Public Policy Making: An Introduction, Boston: Houghton Mifflin Company, 2006.

1. Substantive and procedural policies. Substantive policies are policies implemented by the government that allocate benefits and losses, as well as costs and benefits, directly to the public. Procedural

policies are policies implemented by the government that relate to who will be authorized to take action or how something will be done.

2. Distributive, regulatory, self-regulatory, and redistributive policies. Distributive policies are policies that allocate services or benefits to specific segments of society, namely individuals, groups, companies/institutions, or communities. Distributive policies typically involve the use of public funds to assist specific groups, communities, or institutions. Regulatory policies are policies that prohibit the behavior of individuals or groups, restrict groups of individuals and institutions, or, conversely, force certain types of behavior. These policies are usually protective or regulate competition. Self-regulatory policies are policies that limit or control a group by granting the group the authority to regulate itself in order to protect or promote the interests of its members. Redistributive policies are policies or programs created by the government with the aim of distributing wealth, property rights, and other values among various social classes or ethnicities within a society.

3. Material and symbolic policies. Material policies are policies that provide comprehensive resource benefits to target groups. Meanwhile, symbolic policies are policies that provide symbolic benefits to target groups.

4. Policies involving collective goods or private goods. Public goods policies are policies that regulate the provision of public goods or services. Meanwhile, private goods policies are policies that regulate the provision of goods or services in the free market. Based on the above categorization, we can identify which type of policy our proposed policy falls under.

This is also important because the behavior of policymakers will also depend on the nature of the policy. Several factors influence policymaking behavior. These factors are as follows (Nigro, F.A., and Nigro, L.G., Modern Public Administration, New York: Harper & Row Publishers, 5th ed., 1980: 207):

a) The influence of external pressures.

Public officials often have to make decisions due to external pressures. Policymaking is based on rational assumptions (i.e., policymakers must consider alternatives and choose based on rational judgment), but the policymaking process and procedures cannot be separated from the real world, so external pressures influence the decision-making process. This pressure can come from superiors or other institutions.

b) The influence of old habits (conservatism).

Old organizational habits tend to be followed by public officials even if those decisions have been criticized as wrong and needing to be changed. These old habits are often inherited by new public officials, and they are often reluctant to openly criticize or blame the old habits that have been in place or implemented by their predecessors.

c) The influence of personal traits.

Various decisions made by policymakers are heavily influenced by personal traits. For example, in the process of recruiting/appointing new officials, the personal traits of the decision-maker often play a significant role.

d. The influence of past circumstances.

Previous experiences sometimes influence policymaking. For example, people often make decisions not to delegate some of their authority and responsibility to others because they are worried that the delegated authority and responsibility will be misused.

11.2 PUBLIC POLICY IMPLEMENTATION

Policy implementation is a crucial aspect of the entire policy process. It encompasses not only the decision-making process but also the decisions and who gets what in a policy, particularly in conflict situations. Policy

implementation is broadly defined as a public administration tool where actors, organizations, procedures, techniques, and resources are collaboratively organized to implement policies to achieve desired impacts or goals.

In an effort to improve service practices, policy studies are conducted to address evolving societal issues, building on the development of NPM and NPS theories.

Hupe & Hill, in their book "Implementing Public Policy" (2016:103-121), interpret implementation with five meanings: (a) carrying out instructions; (b) realizing an ideal; (c) adopting legislative directives; (d) carrying out mandates with specific institutions; and (e) achieving various policy outcomes. Furthermore, Hill & Hupe (2002:41-84) classify policy implementation into three approaches: top-down, bottom-up, and synthetic (a combination of top-down and bottom-up).

11.2.1 RIPLEY

HIV/AIDS control efforts are health services that are part of the government's distributive policy in allocating services for HIV/AIDS control. This HIV/AIDS control policy aims to assist the community in controlling HIV/AIDS transmission and provide assistance to groups living with HIV/AIDS by providing treatment and other services. Ripley, as cited in Erwan (2012:106), states that programs or services provided by the government to the community or specific groups constitute distributive policies.

Policy implementation leads to a number of policies based on program objectives and the desired outcomes of government officials. To ensure the program runs smoothly, implementation must include actions by policy actors. Ripley's policy model views policy as a cycle, allowing for policy evolution within each stage. This approach allows for fundamental changes and greater clarity. To assess the quality of output/performance results from the implementation of HIV/AIDS control policies, Ripley (1986), cited in Erwan (2012:106), proposes several indicators, namely:

a. Access

The access indicator is used to determine whether target groups can easily access the services provided. It also measures the ease with which the public can contact those responsible for implementing the

policy. Access also implies equal opportunity for all target groups, regardless of their characteristics.

Thus, access can be interpreted as the absence of discrimination in utilizing and participating in the policy.

b. Coverage

This indicator assesses the extent to which the implemented policy has reached the target group.

c. Frequency

This indicator is used by a policy or program to measure how often the target group receives the promised services.

d. Bias

This indicator is used to assess a policy or program that deviates from the services provided by the implementer to non-target groups.

e. Service Delivery

This indicator is used to assess whether the implementation of a program provides services on time. This indicator is particularly appropriate for assessing the output of a time-sensitive program.

f. Accountability

This indicator is used to assess the accountability of the implementer's actions in delivering policy outputs to the target group.

g. Program Suitability to Needs

This indicator is used to assess whether the policy or program outputs provided to the target group meet their needs.

11.2.2 VAN METER and VAN HORN

A policy or program must be implemented to achieve its desired impact or objectives. This demonstrates the role of public administrators in determining whether a policy formulated and approved by policymakers can be implemented through a conducive and intensive approach. This is expected to serve as a bridge between the state's mandate and the public interest.

The theory proposed by Van Meter and Van Horn (1975) in Leo Agustino (2012:141) as a model of the Policy Implementation Process, posits six variables that form the linkage between policy and performance for

successful policy implementation, taking into account the concepts of change, control, and compliance. These are:

(a) Policy measures and objectives;

For a policy to be realized, its standards and objectives must be clear and measurable. Furthermore, the achievement of a policy must have indicators to assess the extent to which policy objectives have been realized. When measures and objectives are useful in detailing comprehensive policy decisions, they can be easily measured against the program. However, if a policy's objectives are too idealized to be realized at the citizen level, it will be difficult to realize the policy to the point of success. Likewise, if policy standards and objectives are vague, this will lead to conflict due to multiple interpretations among implementation agents.

(b) Resources

Policy implementation requires the support of both human and non-human resources. Policy implementing resources must possess the competency to implement the policy. These competencies enable them to understand, absorb, and interpret the policy's content. Van Metter and Van Horn mention that, in addition to human resources, there are also financial resources and time resources.

(c) Communication

An implementer's ability to respond to and understand policies to communicate their content, including understanding, absorbing, and interpreting their meaning. An implementer must be motivated to communicate the content of a policy to achieve its objectives.

(d) Interorganizational and Reinforcement Activities;

For a policy or program to be successful, coordination and support from various agencies are required in its implementation.

(e) Characteristics of Implementing Agents;

The characteristics of implementing agents can influence the implementation of a program. These characteristics include the bureaucracy, norms, and relationship patterns within the bureaucracy, all

of which will influence program implementation. Furthermore, the scope and extent of policy implementation must be considered when determining implementing agents. The broader the scope of policy implementation, the more agents should be involved.

(e) Social, economic, and political conditions, as well as the characteristics of implementers.

According to Van Metter and Van Horn, assessing the performance of public implementation is the extent to which the external environment contributes to the success of established public policies. Policy implementation failure can occur when the social, economic, and political environment is not conducive.

The Van Meter and Van Horn policy model provides a relevant reference for assessing policy implementation. This model makes it easier to identify influential variables and obstacles encountered during the policy implementation process.

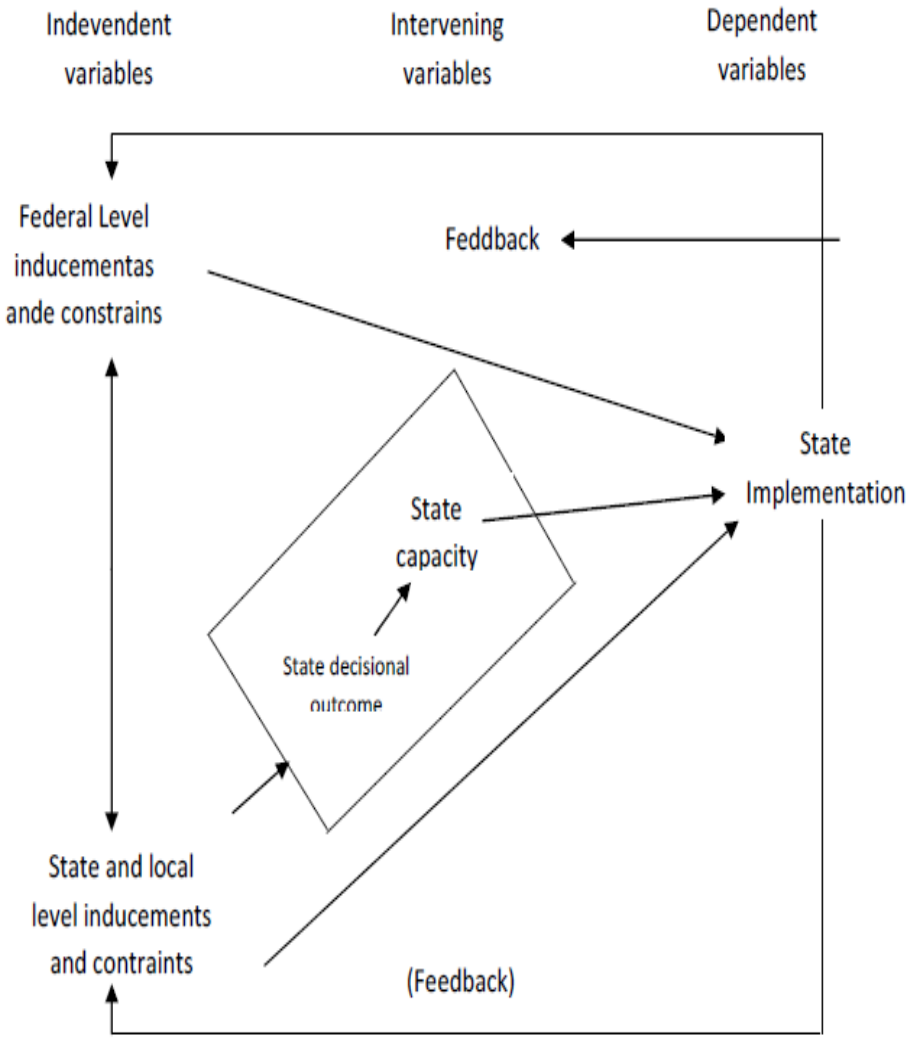
GOGGIN, BOWMAN, and LESTER

Goggin et al. (1990) in Hill, 2002:66, are among the advocates of developing implementation studies in a more scientific direction. They attempt to bridge the gap between top-down and bottom-up approaches, thus avoiding the conceptual weaknesses of both. They encourage implementation research to improve the quality of measurement indicators further. To this end, they establish a "communication model" to analyze the implementation of messages across levels of government and assess their acceptance or rejection. However, critics argue that implementation studies should be developed with a more "intuitive" (qualitative) approach to provide space for exploring explanations of implementation phenomena more comprehensively. This is based on the fact that the factors for successful implementation are complex in positivistic logic, involving various levels of analysis: organizations, policies, individuals, and communities. Therefore, an intuitive approach can provide researchers with space to further explore these factors.

Goggin's communication theory provides an understanding of the relationship between policy implementation and government. Implementers, as

the target of implementation, must be able to interpret the messages. Goggin et al. (1990:40) view implementation as a dynamic process of learning about and reformulating policy. This generation contributes to the complexity of policy implementation phenomena. Goggin's model can be adapted to Indonesian policymaking to assess its effectiveness.

The following is Goggin et al.'s model:



Goggin et al.'s model implicitly implies three important elements in public policy implementation: message content, message format, and perceptions of state leaders. Goggin et al.'s model is broken down into eleven indicators (Goggin et al., 1990: 77):

a. Resources

Goggin et al. explain that resources are a crucial element in policy content. Resources include money/budget, people, time, and

expertise. A budget is a resource provided for possible arrangements for financing and/or providing other resources. A crucial aspect of the resource aspect is that a variety of resources may be required to implement a policy message; not all available resources can be easily exchanged for other types of resources. The resources available through a policy message have a direct impact on implementation. Therefore, the greater the resources, the more likely it is that policy implementation will be accelerated.

b. Credibility of the Message as a Solution

The credibility of the message as a solution, or the credibility of the policy message among potential implementers, is not a simple matter, but it is a crucial one. Some messages can identify policy objectives that are technically impossible to achieve.

c. Policy Efficacy

All policies, except symbolic ones, are designed to address some public problem. But some problems are easier to address, both technically and politically, than others. Some policies are based on a well-tested set of cause-and-effect principles and thus offer the promise of stability. Much of the implementation process for these policies has been reduced to a matter of engineering, thus providing ease and certainty for implementers charged with achieving national goals.

d. Community Participation

Community participation is a viable tool for policy development. The more actors added to the implementation network, the greater the chance of obstacles or pitfalls hindering the program's conversion into action. This effect clearly undermines some degree of certainty in the implementation process. Pressman and Wildavsky assert that the probability of successful implementation is inversely proportional to the number of actors and decision points (1984:87-124). Mazmanian and Sabatier also reach the same conclusion in their well-known empirical work (1983:27).

e. Policy Type

The type of policy contained in a policy message can also be important for the likely implementation pattern. The notion of policy type here has a specific meaning, not to indicate substantive differences. One important reason is that complex implementation processes often require significant time, energy, expertise, and organizational capacity.

f. Policy Clarity

In everyday life, policies are more likely to be acted upon wisely if they are communicated clearly. The same applies to policy messages from officials. Clarity can be defined in terms of two final elements: meaning and outcome.

Messages that contain direct statements of standards or targets—especially those without qualifications, contradictions, or ambiguous language—are unambiguous regarding their purpose. Messages that set out specific procedures" (Montjoy and O'Toole, 1979: 468) must be followed by implementers, especially those with deadlines and/or instructions regarding mandated patterns of interdependence and formal authority among implementing actors (individuals or organizations). Specific and clear with respect to means, policies that include clarity with respect to both means and ends should be perceived as clearer than those that are unclear in one respect and clear in another.

g. Policy Consistency

Policies can, individually or cumulatively, be clear but inconsistent. This is because, if we understand policies as messages, or as a stream of messages—perhaps emanating from multiple officials—the social science findings on the effects of messages with the characteristics just mentioned—complexity and ambiguity—are quite straightforward. Recipients of such messages are more likely to perceive messages selectively (Simon and Dearbom, 1958). Selective perception means that such policy messages are less likely to stimulate immediate implementation in federally prescribed directions.

h. Frequency of Message Repetition (Policy)

Clarity and consistency aid in the communication process through a series of inducements and constraints to actors. Communication theory suggests an additional factor: messages transmitted regularly and when their content is consistent are more likely to be accepted and acted upon.

i. Policy Recipients

The most brilliant policies in the world are worthless if they are stored; they are left untranslated into administrative regulations.

j. Legitimacy of Regional Policy-Making Leaders

How state and local governments perceive the legitimacy of federal officials is not an all-or-nothing matter. Rather, some national government actors are viewed as authoritative in certain policy arenas or on specific issues.

k. Credibility of Central-Level Leaders.

This analysis omitted coverage of one additional element that can influence the message's impact on implementers: the credibility of the sender. Certain policy elements can influence credibility. This element of our Communication Model can also be influenced by the interaction itself. Because it inherently requires complex patterns of coordination over time, expedient action encourages cooperative action (O'Toole and Montjoy, 1984). Implementation integrated within a period of trust, after eliminating key components that may differ from the recipient's message on an issue, can increase bargaining opportunities.

Regardless of the method used to produce policy, the bottom line is that credibility can be a resource that actors can bring to the implementation context or can develop within that context, due to the dynamics of the process it opens up. Credibility

is not only a matter of cooperative trust; it can also facilitate implementation in some situations by convincing potential implementers. (Noviana, 2019)

The success of a bureaucracy is greatly influenced by organizational capacity and plays a significant role in policy implementation. Despite the diversity of implementing agencies involved in policy implementation, the bureaucracy still holds a dominant position.

The more complex a policy, the more human resources must be provided to carry out the task of implementing the policy. The number of human resources an organization has depends on the tasks to be carried out. The ability of human resources to meet organizational needs, such as knowledge, skills, and personality.

Financial support and the resources the organization needs to work. The four elements outlined by Goggin must be included for a policy to be successfully implemented. These four elements must be in optimal condition and support each other in order to achieve a policy with the right organizational structure design.

CASE STUDY AND REGIONAL ANALYSIS

Case Study 1: Implementation of HIV-AIDS Control Policy in South Kalimantan Province

The government and the community are strongly committed to HIV/AIDS control efforts to achieve the elimination of HIV/AIDS and Sexually Transmitted Infections (STIs) by 2030. The implementation of HIV/AIDS control policies in South Kalimantan Province is inseparable from national HIV/AIDS prevention and control policies. Therefore, the National Action Plan serves as a reference for implementing activities and is expected to harmonize the struggle to end AIDS by 2030. Support from relevant Ministries/Institutions/Agencies, along with the community, including public support in general, is essential to achieve strategic steps toward achieving the ultimate goal of achieving Three Zeros: reducing new HIV infections, reducing AIDS-related deaths, and eliminating stigma and discrimination caused by HIV/AIDS.

The South Kalimantan Provincial Government's response, issuing Governor Regulation No. 71 of 2016, is a top-down policy model because it is assumed to be the government's own initiative and implemented by the government (Van Meter and Van Horn, 1975).

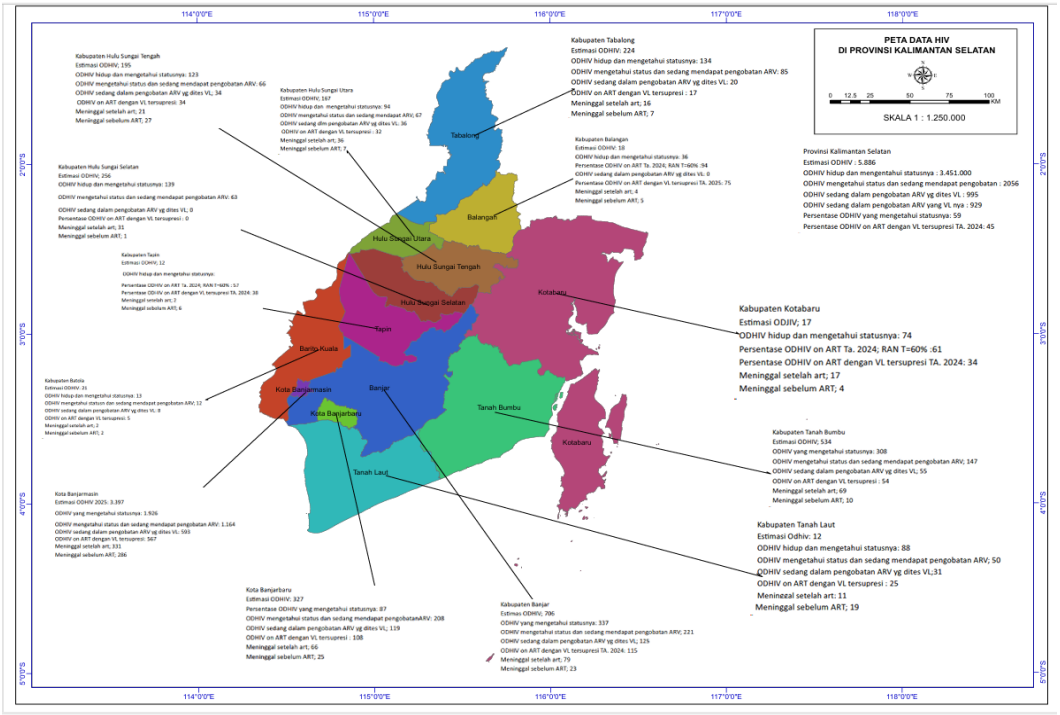
Table of HIV/AIDS Control Regulations in Regencies/Cities

No	Regencies/Cities	Regulation	AIDS Commission
1	Tanah Laut	Nothing	Nothing
2	Kotabaru	Nothing	Nothing
3	Banjar	Nothing	Have
4	Barito Kuala	Nothing	Nothing
5	Tapin	Nothing	Nothing
6	Hulu Sungai Selatan	local regulation NO. 4 th 2021	Nothing
7	Hulu Sungai Tengah	Nothing	Nothing
8	Hulu Sungai Utara	Nothing	Nothing
9	Tabalong	Nothing	Nothing
10	Tanah Bumbu	Regent's regulation No. 18 th 2018	Have
11	Balangan	Nothing	Have
12	Kota Banjarmasin	local regulation NO.11 TH 2011	Have

13	Kota Banjarbaru	local regulation No. 1 th 2014	Have, not active
14	Kalimantan Selatan	governor's regulation No. 71 Tahun 2016	Have

Source: processed by researchers, 2025

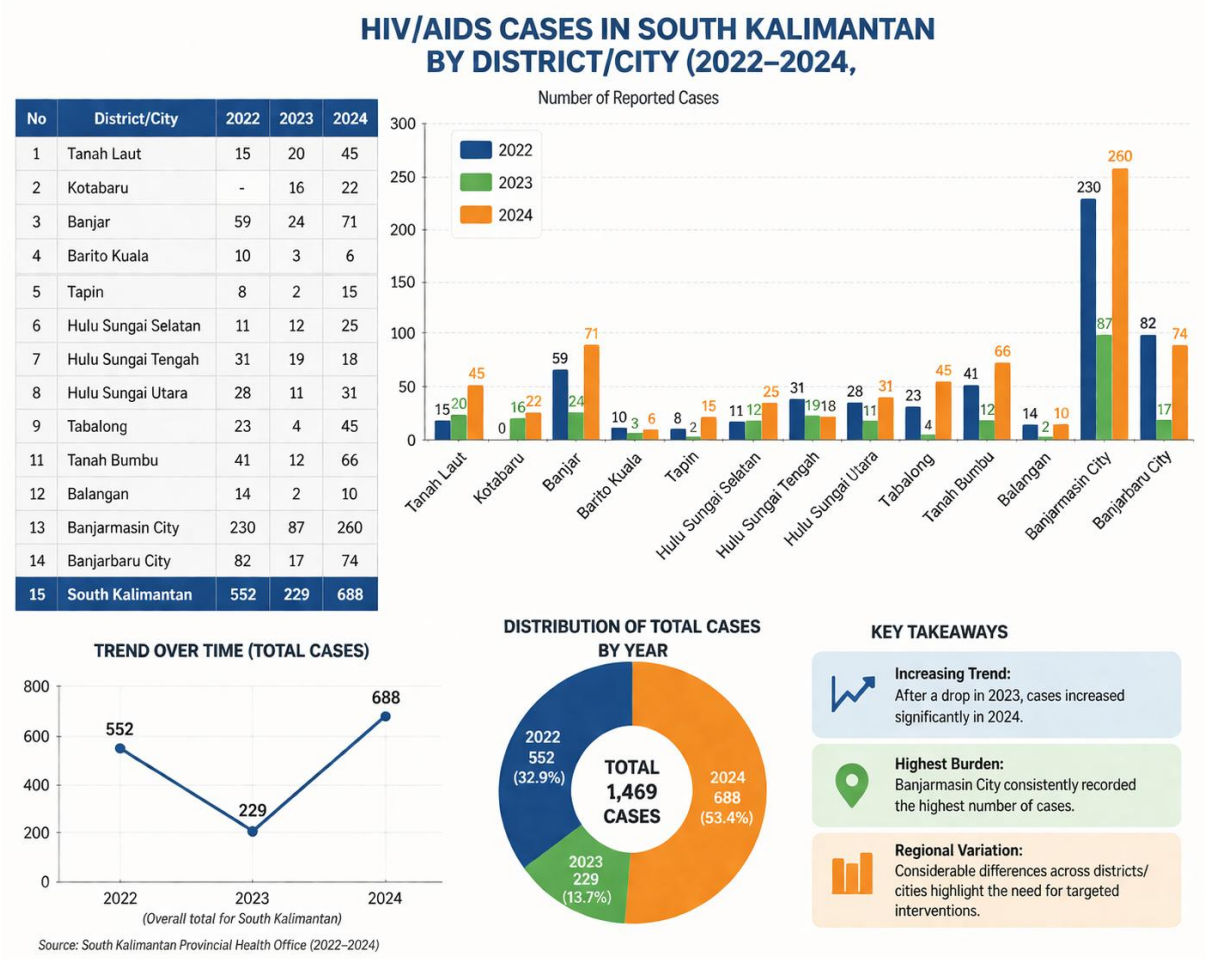
GIS HIV Data in South Kalimantan



Source: processed by researchers, 2025

The image above is a GIS map of HIV data in South Kalimantan through March 2025. This data was obtained from the South Kalimantan Provincial Health Office during an interview. The data displayed includes the estimated number of people living with HIV, the number of people alive and aware of their status, the percentage of people on ART, the percentage of people on ART with suppressed HIV, and data on deaths after ART and deaths before ART.

The table below shows the number of new HIV/AIDS cases in South Kalimantan Province from 2022 to 2024.



No	District/City	2022	2023	2024
1	Tanah Laut	15	20	45
2	Kotabaru	-	16	22
3	Banjar	59	24	71
4	Barito Kuala	10	3	6
5	Tapin	8	2	15
6	Hulu Sungai Selatan	11	12	25
7	Hulu Sungai Tengah	31	19	18
8	Hulu Sungai Utara	28	11	31
9	Tabalong	23	4	45
11	Tanah Bumbu	41	12	66
12	Balangan	14	2	10
13	Banjarmasin City	230	87	260
14	Banjarbaru City	82	17	74
15	South Kalimantan	552	229	688

Source: One data of South Kalimantan, 2025

Data illustration shows that the development of HIV/AIDS in South Kalimantan is influenced by a complex interaction between epidemiological factors and the health system. The surge in cases in 2024 indicates increased detection and potential improvements in the service system, but also emphasizes the need for a convergent and integrated system approach to ensure the sustainability of effective HIV/AIDS control.

One effort to improve health is through HIV/AIDS prevention and control. The table above explains the increase in the number of HIV/AIDS cases in South Kalimantan from 2022 to 2024.

a. PURPOSE

The general provisions of Governor Regulation No. 071 of 2016 concerning prevention include all efforts and activities undertaken, including prevention, treatment, and rehabilitation. The implementation of HIV/AIDS control is carried out in a

comprehensive, integrated, and sustainable manner. To achieve the objectives of Governor Regulation No. 071 of 2016, all relevant agencies involved in implementing HIV/AIDS control must be aware of and understand these regulations. Achieving this goal requires collaboration between provincial and district/city level Regional Work Units, relevant technical agencies, the business community, universities, AIDS-focused NGOs, and the community. This is stipulated in Article 6 of Governor Regulation No. 17 of 2016 concerning efforts to promote behavioral change.

To achieve the goals of Regional Regulation No. 071 of 2016 on HIV/AIDS prevention, a clear structure for the implementation process is required, clearly outlining the objectives to be achieved. Furthermore, clear authority for policy implementation is required, as this will influence the policy orientation of implementing agencies.

The objectives of Governor Regulation No. 71 of 2016 concerning HIV/AIDS prevention in South Kalimantan Province are outlined in Article 2, which aims to implement HIV/AIDS prevention in a comprehensive, integrated, and sustainable manner.

The Phenomenon of HIV/AIDS Control Policy Implementation

- The objectives of this policy have not been properly socialized, resulting in its ineffectiveness in reaching the community. While the principle of integrated HIV/AIDS control should be integrated into a single unit, it should be integrated into HIV/AIDS control.

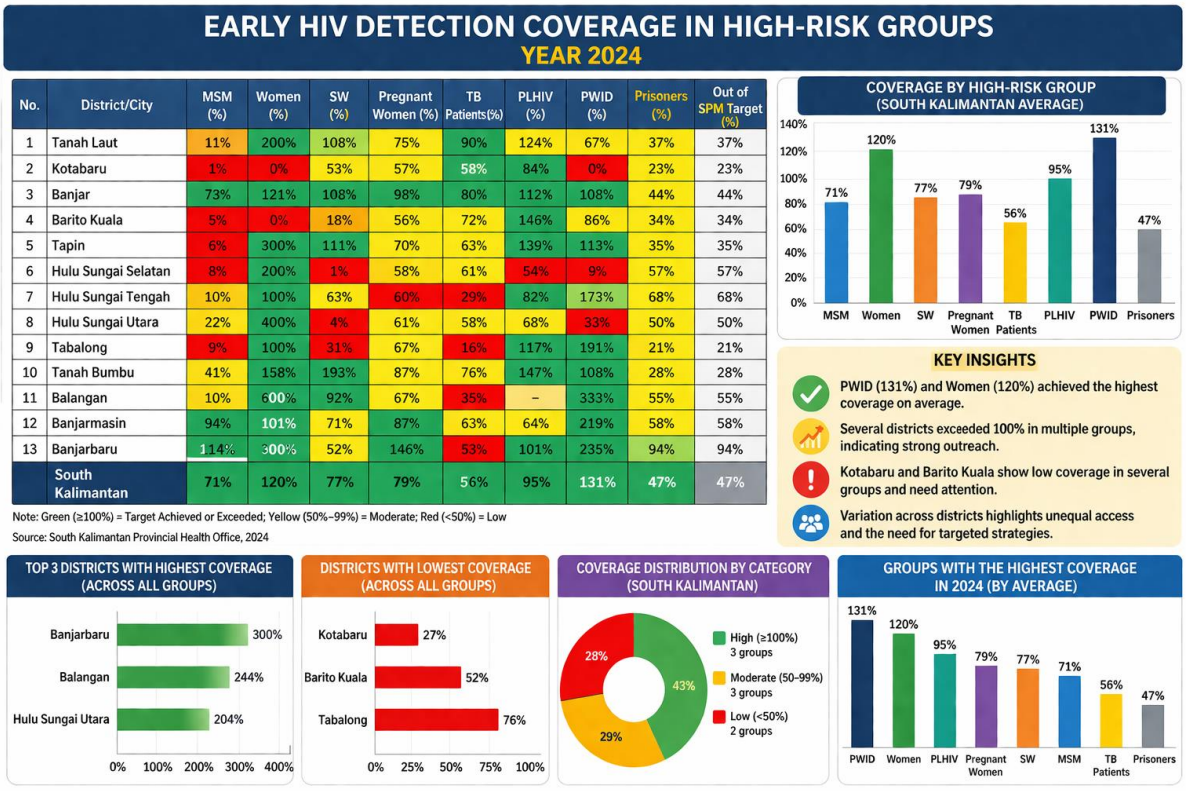
- In reality, agencies involved in HIV/AIDS control have not implemented HIV/AIDS control collectively; some agencies are even unaware of the Governor's Regulation. Some agencies implement control efforts based on programs derived from central policies. This demonstrates the unclear implementation of the integrated principle.

- The policy is ineffective because the designation of agencies involved in implementing the HIV/AIDS control policy is clearly stated in Regional Regulation No. 71 of 2016, but there are no standards or basis for its implementation, such as derivative regulations or technical guidelines.

b. TARGETS

In HIV/AIDS control efforts in South Kalimantan, the targets are high-risk groups, vulnerable groups, and the general public. This is stated in Article 3 of Governor Regulation No. 17 of 2016.

Table: Achievements of early HIV detection among at-risk groups in South Kalimantan Province by 2024



No.	District/City	MSM (%)	Women (%)	SW (%)	Pregnant Women (%)	TB Patients(%)	PLHIV (%)	PWID (%)	Prisoners (%)	Out of SPM Target (%)
1	Tanah Laut	11%	200%	108%	75%	90%	124%	67%	37%	37%
2	Kotabaru	1%	0%	53%	57%	58%	84%	0%	23%	23%
3	Banjar	73%	121%	108%	98%	80%	112%	108%	44%	44%
4	Barito Kuala	5%	0%	18%	56%	72%	146%	86%	34%	34%
5	Tapin	6%	300%	111%	70%	63%	139%	113%	35%	35%
6	Hulu Sungai Selatan	8%	200%	1%	58%	61%	54%	9%	57%	57%
7	Hulu Sungai Tengah	10%	100%	63%	60%	29%	82%	173%	68%	68%
8	Hulu Sungai Utara	22%	400%	4%	61%	58%	68%	33%	50%	50%
9	Tabalong	9%	100%	31%	67%	16%	117%	191%	21%	21%
10	Tanah Bumbu	41%	158%	193%	87%	76%	147%	108%	28%	28%
11	Balangan	10%	600%	92%	67%	35%	–	333%	55%	55%
12	Banjarmasin	94%	101%	71%	87%	63%	64%	219%	58%	58%
13	Banjarbaru	114%	300%	52%	146%	53%	101%	235%	94%	94%
	South Kalimantan	71%	120%	77%	79%	56%	95%	131%	47%	47%

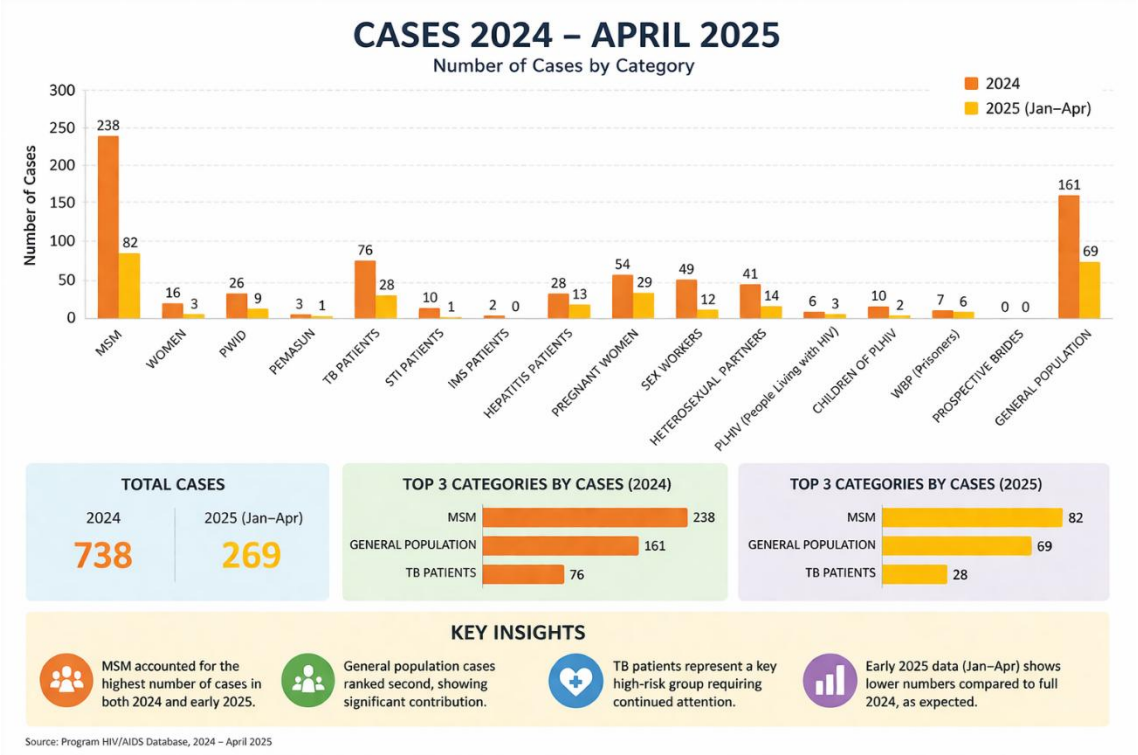
Source: South Kalimantan Provincial Health Office, 2025

The achievement of early HIV detection among at-risk groups in South Kalimantan in 2024 showed significant progress in some groups, but significant structural gaps remain. A service convergence approach and system integration are key to increasing coverage equitably and ensuring sustainable HIV/AIDS control.

Based on the above data, it is clear that the HIV/AIDS response program in South Kalimantan Province targets at-risk groups, sexually active men (MSM), transgender women (Women), sex workers (FSW), pregnant women, TB patients, prisoners with STIs, and STI patients. The highest at-risk group is the STI group (131%), followed by transgender women (120%). According to Governor Regulation

No. 071 of 2016, the targets for HIV/AIDS response include people living with HIV/AIDS (PLWHA), high-risk groups, vulnerable groups, and the general public.

HIV/AIDS can be categorized as a difficult policy issue. Not only is HIV/AIDS a new disease, but it is also challenging to approach because it is highly sensitive. This is because there is a lot of stigma in society towards people with HIV/AIDS, so that they end up isolating themselves and are difficult to reach (Noviana, 2019).



Source: South Kalimantan Provincial Health Office, 2025

The illustration shows that the dynamics of HIV cases in South Kalimantan reflect a complex epidemic transition, with a predominance of key groups and an increasing contribution from the general population. A converged approach to services, integrated health systems, and population- and couple-based interventions is key to sustainably controlling HIV transmission.

Based on the data above, the number of cases detected by gender is higher than the number of cases detected because each person living with HIV (PLHIV) represents more than one population/risk group. The highest number of cases is among sexually active men (MSM), with 238 cases in 2024 and 82 cases as of April 2025.

Efforts to control HIV/AIDS in South Kalimantan Province must be inseparable from the facts within the province, including high-risk population groups, groups

vulnerable to HIV/AIDS, and the HIV/AIDS transmission model in the region. Given the high number of HIV/AIDS cases, which are predominantly among sexually active men (MSM), efforts are needed to change the behavior of this community to adopt healthier lifestyles (Noviana, 2019). Current control efforts:

- Have not focused on the MSM community, which is currently experiencing significant increases.
- Programs implemented follow previous programs, so they are not aligned with local cases, particularly the increase in cases among sexually active men.
- Budgetary constraints mean that programs are implemented based on the budget.
- Difficulty reaching the MSM community, which is a barrier to HIV/AIDS prevention.

PREVENTION

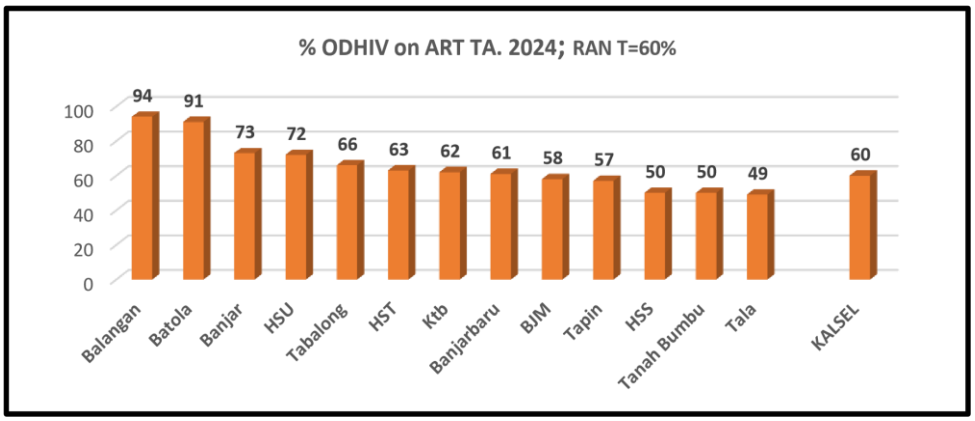
According to Governor Regulation No. 071 of 2016 concerning the implementation of HIV-AIDS prevention and control in South Kalimantan Province, Article 5 addresses HIV-AIDS prevention. Article 5 states that prevention efforts can be implemented through promoting behavior change, preventing HIV through sexual transmission, providing HIV counseling and testing, preventing maternal and child transmission, implementing universal precautions, HIV screening, providing HIV, reproductive health, and STI education, reducing the risk of HIV transmission in prisons, etc., and establishing VCT and CST services.

Field data indicates that

- condom distribution has not yet reached key populations.
- support and attention from relevant stakeholders
- Prevention efforts should be in line with local realities.

TREATMENT

Graph of Percentage of People Living with HIV on ARVs for FY 2024



Data Source: South Kalimantan Provincial Health Office, 2025

The percentage of people living with HIV/AIDS (PLHIV) who initiated ARV treatment is an indicator used to measure the success of HIV/AIDS prevention and control efforts. This indicator has not been achieved due to several factors, such as the failure of Community Health Centers (Puskesmas), the spearhead of HIV Program Management, to report on the implementation of all services.

Field findings indicate:

- Stigma and discrimination among healthcare workers, both medical and non-medical.
- Competence of healthcare workers.
- Effective communication and empathy in providing treatment for people living with HIV/AIDS.
- ARV drugs are freely available.

SUPPORT

The implementation of HIV/AIDS prevention requires support for people living with HIV/AIDS (PLHIV), based on clinical, family, peer support groups, professional organizations, and community-based approaches. This is explained in Article 17 of Governor Regulation No. 017 of 2016.

- Lack of certified counselors, as training is no longer provided.
- It's been a long time since there's been any training on HIV/AIDS, due to government budget cuts.
- Not all districts/cities have peer support groups or community groups.

- Communication with communities or people living with HIV is difficult because they fear unfair treatment, which makes them more withdrawn.
- In some cases, medication shortages have occurred because they have to travel to Banjarmasin to collect medication, which takes time.
- Difficulty communicating with HIV administrators complicates the medication collection process.

A. FACTORS AFFECTING THE IMPLEMENTATION OF HIV-AIDS CONTROL POLICIES IN SOUTH KALIMANTAN

ACCESS

Access is crucial for achieving policy objectives. If access to an activity or program is disrupted, its objectives will not be achieved.

The facts on the ground are:

- Limited access for people with HIV/AIDS to access ARV medication.
- Stigma and discrimination from health workers.
- Cross-sector coordination is not functioning optimally. Only a few relevant agencies coordinate and collaborate in HIV-AIDS response efforts.
- Several relevant agencies have not implemented HIV-AIDS response efforts. This is because these agencies consider HIV-AIDS response efforts not within their respective duties.
- Most of the agencies listed in Governor Regulation No. 071 of 2016 have not received information about this regulation or regional regulations related to HIV-AIDS response.
- Increased prostitution activity in South Kalimantan has an impact on South Kalimantan.
- Lack of outreach workers in each district/city in South Kalimantan province.
- Access to health services for people living with HIV/AIDS

PROGRAM ALIGNMENT TO NEEDS

HIV/AIDS prevention efforts in South Kalimantan Province are regulated in Governor Regulation No. 017 of 2016. The objectives set out in this regulation are to reduce the number of HIV/AIDS cases and improve the quality of life of people living with AIDS in South Kalimantan.

The policies implemented by the South Kalimantan Provincial Health Office align with the national strategy, namely prevention, surveillance, case management, and health promotion. However, there are differences in the details between the province and the national level, depending on regional needs and available budget.

However, the reality on the ground is that the programs implemented are continuations of previous years' programs, making it appear that the programs are simply implementing routine programs. Another fact found in the field is that HIV/AIDS prevention outreach activities are being conducted among the general public, schoolchildren, and university students. These activities are very effective, but they do not yet prioritize MSM as a primary focus for HIV/AIDS control.

SOCIAL AND ECONOMIC CONDITIONS

Socioeconomic aspects are one of the pillars of human life, and their impacts affect various levels of society. In the policy process, socioeconomic aspects are crucial to consider when formulating policies.

Based on field interviews, it was found that the increase in risky sexual behavior is influenced not only by economic factors but also by lifestyle factors.

Some communities still consider people living with HIV to be a disease caused by negative behavior. Health workers and the community still discriminate and stigmatize people living with HIV.

RESOURCES

BUDGETARY RESOURCES

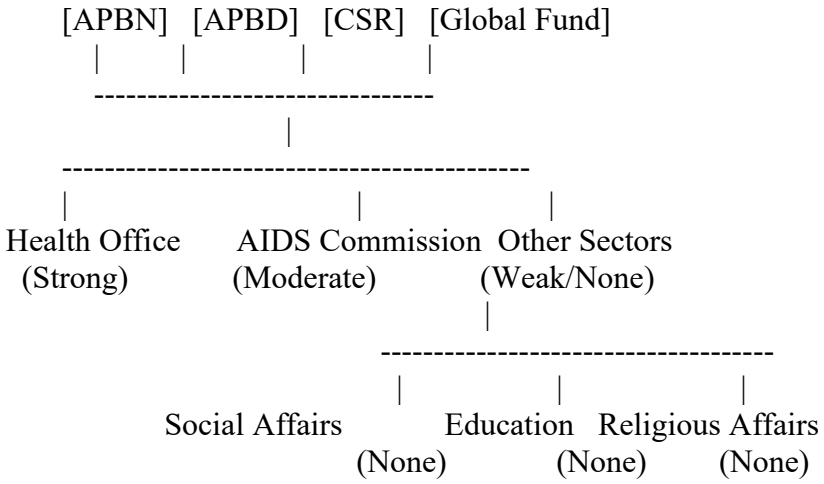
Resources are a crucial element in the policy context. Various resources may be required to implement a policy. Resources include money/budget, people, time, and expertise. Each local government allocates a separate budget from the regional budget (APBD) for HIV/AIDS control activities. Observations during the research found:

- Budget allocation for HIV/AIDS response efforts in South Kalimantan Province is limited to the Provincial and Regency/City Health Offices. The Social Services Department previously had a budget for HIV services from the Ministry of Social Affairs at the central level, but this has now been eliminated.

- Other agencies involved in HIV/AIDS response efforts in South Kalimantan Province do not have separate budgets.

- Delays in funding from the Global Fund have prevented the KPA from carrying out its activities to their full potential.

Flow Diagram FUNDING STRUCTURE (2025)

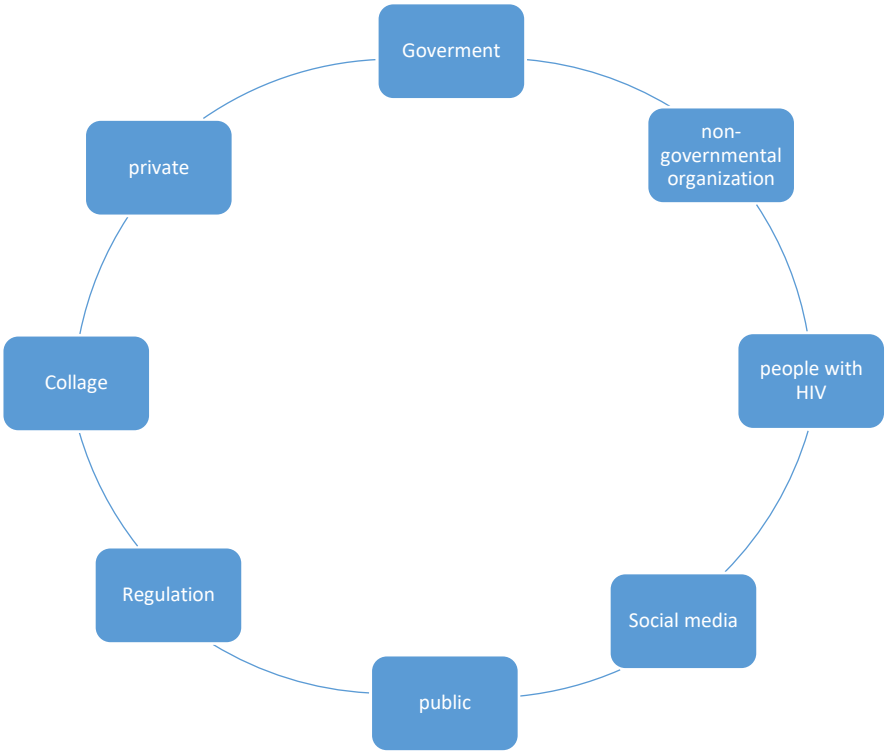


Source: Interview, processed by 2025 Researchers

Based on discussions with the Ministry of Health's infectious disease management division, it was stated that there is no budget for HIV this year from the State Budget (APBN), only for ARVs. Therefore, HIV/AIDS response activities in the provinces are expected to be allocated from the Regional Budget (APBD). The reality on the ground shows that the APBD allocation for HIV/AIDS is still very small (<1% of the total health budget), especially in regions with low fiscal priorities (Kemenkes, 2023).

HUMAN RESOURCES

HIV/AIDS response is a complex public health issue that requires a multidimensional approach, one of which is through scientific and strategic resource management, including human resources (HR). Scientifically, human resources in HIV/AIDS response efforts include medical personnel, community health workers, social workers, educators, and volunteers who play a role in prevention, treatment, care, and support.



The human resources respondents in this study came from government agencies, applicable regulations, the community, the private sector or CSR, universities, AIDS-focused NGOs, people living with HIV who receive services, and social media as a source of information about HIV/AIDS. The availability and equitable distribution of human resources have been shown to increase early detection rates and patient adherence to treatment (WHO, 2022).

Field findings revealed that:

- Officers in charge of HIV/AIDS programs also manage other programs.
- CSR indirectly supports VCT activities within health services through health screenings for workers.

- However, there are no outreach institutions in the district, making it very difficult to engage with the community of sexually active men.
- People living with HIV/AIDS often face stigma and discrimination that hinder access to health services, employment, and social life.
- There is a need to reformulate HIV/AIDS control policies, as they are no longer relevant to current conditions. Numerous facts were obtained regarding regulations, such as the fact that most agencies listed in the Governor's Regulation are unaware of these regulations and would even undertake HIV/AIDS control efforts if there were regulations/letters.

Social media can serve as empirical data for detecting the spread of misinformation or hoaxes that hinder health policies.

INFRASTRUCTURE RESOURCES

Infrastructure resources in the HIV/AIDS response are a critical component in supporting the effectiveness of prevention, treatment, care, and support programs for people living with HIV (PLHIV).

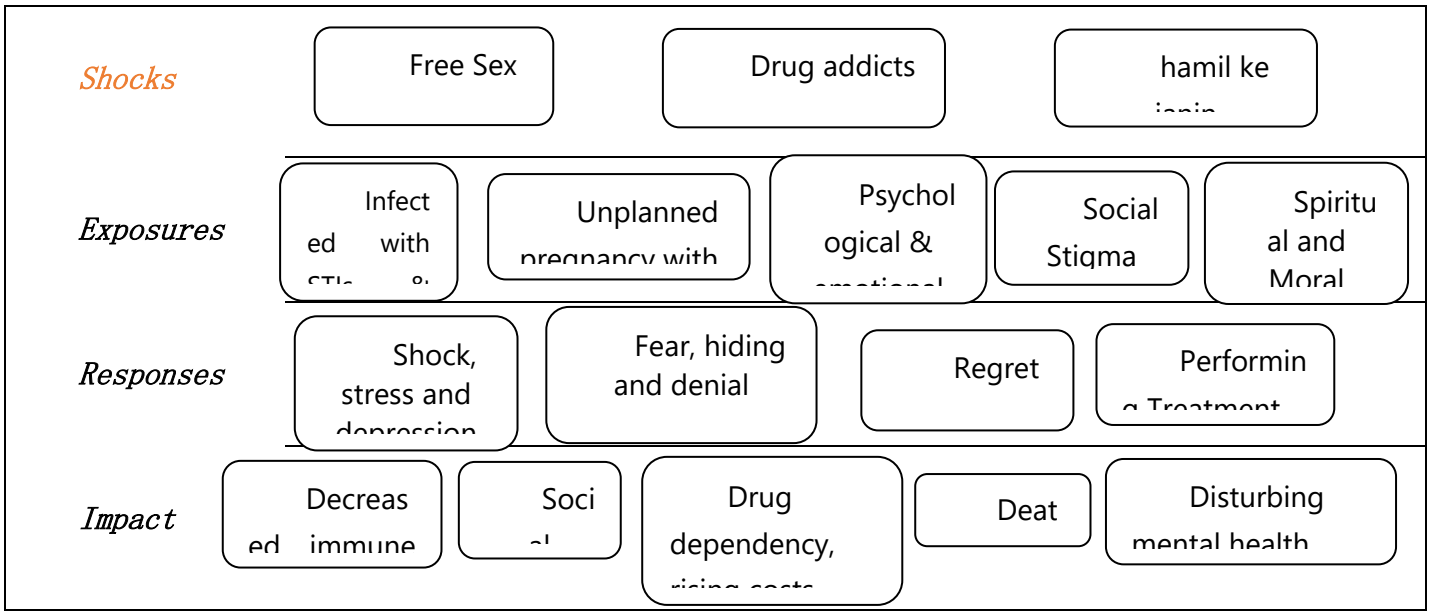
Field findings indicate that:

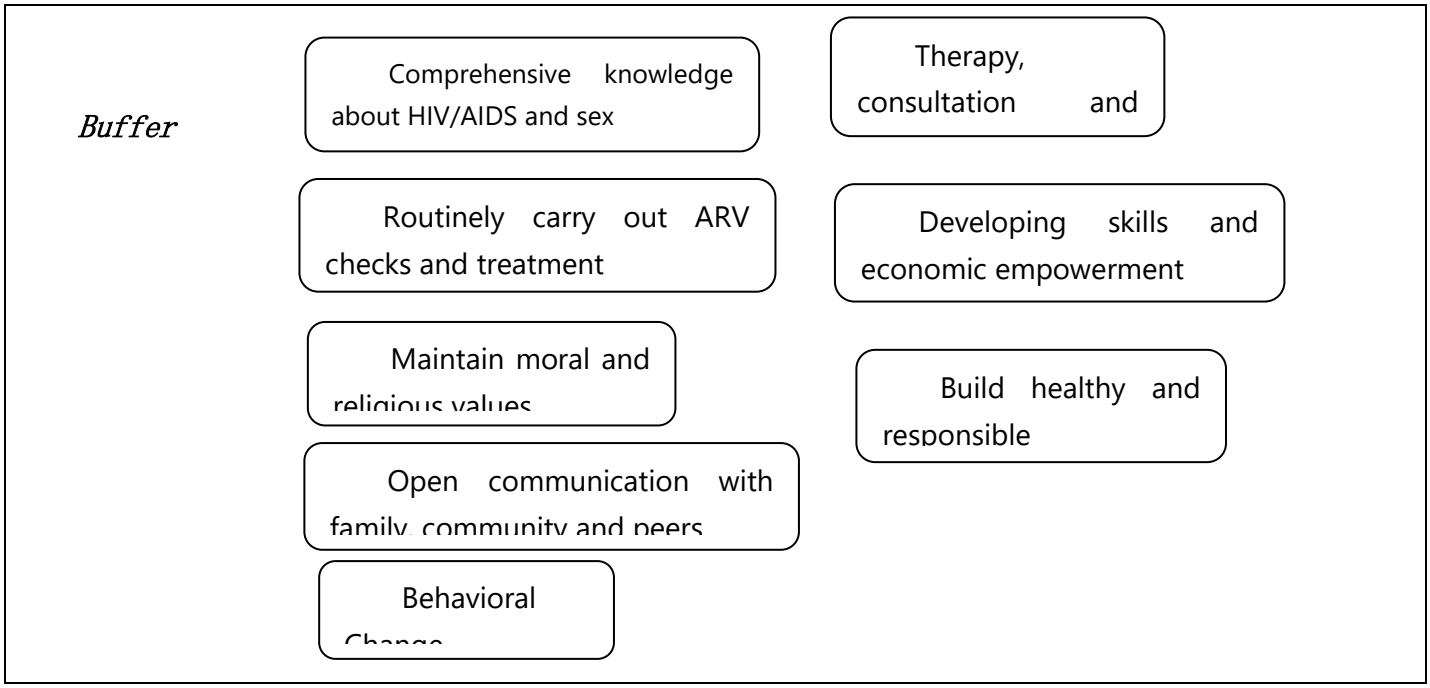
- Health facility infrastructure in HIV/AIDS response efforts is still suboptimal. This is because not all healthcare facilities can provide services to people living with HIV.

- People living with HIV not only experience transportation difficulties when collecting medication but are also required to pay registration fees at the counter for each medication collection.

VULNERABILITY ASSESSMENT OF RISK FACTORS FOR THE RISE OF HIV/AIDS

Vulnerability refers to low resilience, referring to integrated ecological and social systems. The focus of vulnerability assessments is resilience, adaptability, and the ability to make changes (ICRAF, 2017). Vulnerability to risk factors for the rise of HIV/AIDS can be viewed from various perspectives, such as medical, epidemiological, social, and behavioral. Vulnerability assessment of risk factors in the spread of HIV/AIDS is a systematic scientific process for identifying, evaluating, and managing the risk of HIV/AIDS transmission and its impact on individuals and populations. The goal is to design interventions that are effective, evidence-based, and epidemiologically appropriate.





Based on the research results, the events (shocks) that caused the increase in HIV AIDS cases in South Kalimantan were free sex, injecting drugs, and mother-to-fetus transmission. The consequences of these shocks or exposure experienced by PLHIV during these shocks are contracting HIV AIDS, experiencing psychological disorders, social stigma, and spiritual and moral impacts. The efforts or responses of the majority of PLHIV to these problems are shock, stress, and depression. Some feel afraid, hide their identities, and refuse the test results. And others immediately seek treatment, after finding out they are positive. The impact of these problems (shocks) is causing a decline in the immune system, even to the point of death, experiencing mental health disorders and social stigma in the community and family environment. It also causes drug dependence and increased costs. Efforts to reduce the impact of KLB (shocks) on the health of PLHIV, require capacity building such as: (1) increasing knowledge about HIV AIDS and the dangers of free sex; (2) therapy, consultation and treatment; (3) routine screening/testing; (4) maintaining moral and religious values; (5) having open communication with the family; (6) dare to reject peer pressure and (7) build healthy and responsible relationships.

FORCASTING

Forecasting in HIV/AIDS response efforts is essential to support evidence-based public health policies. Forecasting enables experts, researchers, and policymakers to estimate the spread of HIV, evaluate the impact of interventions, and design appropriate strategies.

The following is the forecasting of HIV-AIDS data in South Kalimantan Province in the last 3 years.

No	Kabupaten/Kota	2022	2023	2024	Average Growth (%)	2025	2026	2027
1	Tanah Laut	15	20	45	79,17	81	145	259
2	Kotabaru	0	16	22	18,75	26	31	37
3	Banjar	59	24	71	68,26	119	201	338
4	Barito Kuala	10	3	6	15,00	7	8	9
5	Tapin	8	2	15	287,50	58	225	873
6	Hulu Sungai Selatan	11	12	25	58,71	40	63	100
7	Hulu Sungai Tengah	31	19	18	-21,99	14	11	9
8	Hulu Sungai Utara	28	11	31	60,55	50	80	128
9	Tabalong	23	4	45	471,20	257	1468	8386
10	Tanah Bumbu	41	12	66	189,63	191	554	1604
11	Balangan	14	2	10	157,14	26	66	170
12	Kota Banjarmasin	230	87	260	68,34	438	737	1240
13	Kota Banjarbaru	82	17	74	128,01	169	385	877
14	Kalimantan Selatan	552	229	688	70,96	1176	2011	3438

a. Estimated HIV/AIDS in South Kalimantan with low (minimum) growth = -58.51% in 2025-2027

No	Year	Total
1	2025	285
2	2026	118
3	2027	49

Based on the minimum estimate, the number of HIV/AIDS cases in 2027 is projected to decrease by -58.51% compared to the baseline (the initial forecast year: 2025). This indicates a decline in the number or a downward trend. Therefore, the minimum estimate indicates a sharp decline in the rate of HIV/AIDS spread over the next three years, or a decline in the number of new HIV/AIDS cases by more than half of the initial value.

The epidemiological interpretation of the -58.51% decline can be interpreted as a positive indicator, provided that the decline is due to sound programmatic factors, not under-reporting or limited case detection.

b. Estimate of HIV/AIDS in South Kalimantan with moderate growth = 70.96% in 2025-2027

No	Year	Total
1	2025	1.176
2	2026	2.011
3	2027	3.438

Based on the results of forecasting estimates of HIV/AIDS in South Kalimantan, with moderate growth of +70.96% for 2025–2027. Scientifically, moderate growth of +70.96% indicates that the number of HIV/AIDS cases in South Kalimantan is projected to increase almost twofold during the 2025–2027 period compared to the 2025 baseline.

c. Estimate of HIV/AIDS in South Kalimantan with high growth (maximum) = 200.44% in 2025-2027

No	Year	Total
1	2025	2.067
2	2026	6.210
3	2027	18.657

Based on forecasting data, the HIV/AIDS estimate in South Kalimantan with high growth (maximum) = 200.44% in 2025-2027, means that cases at the end of the period (2027) will be 200.44% higher than the baseline at the beginning of the period (for example, 2025).

Case Study 2: Epidemic Dynamics and Policy in Papua

Papua and West Papua occupy a unique and worrying position on the HIV epidemiological map in Indonesia. Unlike other regions where transmission is concentrated in certain key populations, in Papua, the epidemic has reached Generalized Epidemic status, where transmission has spread to the general population through heterosexual intercourse. This situation demands a radically different policy approach, one that can no longer rely solely on intervention strategies designed in Jakarta. Policies in Papua must address extreme geographic challenges, in which many settlements are accessible only by air, as well as sociocultural challenges rooted in deeply held customary norms (Ministry of Health of the Republic of Indonesia, 2024).

A critical analysis of policy implementation in Papua reveals a gap between the availability of funds (through the Special Autonomy Fund) and the achievement of health indicators. Despite the substantial budget allocation, its effectiveness is often hampered by the maldistribution of trained health workers and high levels of stigma in rural communities. Policy reorientation in Papua must prioritize the role of traditional and religious leaders as "gateways" to health services. Without social support from local authorities, even the most sophisticated medical programs will be rejected or

ignored by the community. A medical sociology approach is a mandatory tool in designing interventions in this region.

The main challenge in Papua is maintaining the drug supply chain and laboratory logistics. In the central highlands, ARV distribution relies heavily on pilot flight schedules, which are often disrupted by weather or security situations. This situation creates a high vulnerability to lost-to-follow-up. The "prolonged drug administration" (MMD) policy is a highly relevant solution here, but it must be accompanied by strengthening the capacity of village health cadres to monitor adherence. Furthermore, the prevalence of HIV and tuberculosis (TB) coinfection in Papua is among the highest in the nation, making integrated TB-HIV services no longer an option but an operational necessity at every community health center (Puskesmas) (Handayani et al., 2023).

Beyond logistical aspects, Papua faces significant human resource retention challenges. Many healthcare workers from outside Papua do not stay long due to geographic isolation and cultural differences. Affirmative action policies to educate local youth to become professional medical personnel must be massively

accelerated. Having health workers who understand local languages and traditions will significantly increase patient trust in the healthcare system. Geographic equity in Papua means not only building a grand hospital in Jayapura, but also ensuring that a mother in Puncak Jaya can receive friendly and safe VCT services without having to travel for days.

Local leadership at the district level in Papua plays a central role in determining policy direction. Some regents have demonstrated innovation by allocating special autonomy funds specifically to incentivize community outreach workers in remote areas. However, in other regions, HIV issues are often considered secondary to physical development. Policy transformation requires the establishment of minimum service standards (SPM) tailored to the Papuan context, where national targets are given flexibility in how they are achieved. For example, the use of mobile clinics using helicopters or speedboats must be accommodated within an administratively legitimate budgeting structure.

Case studies in Papua also highlight the importance of a robust health information system. Due to the high mobility of residents between the mountains and coastal areas, electronic medical records that can be

accessed offline and then synchronized when an internet signal is available are an urgent need. Digitalization in Papua should not be assumed to have the same connectivity as in Java. Technological innovations that adapt to low-resource settings will be key to successful long-term patient monitoring. Papua is a true test of the Indonesian government's commitment to social justice in health.

A deeper analysis at the community level in Papua reveals that women are often the most vulnerable group. Inequality in gender relations makes it difficult for women to negotiate safe sex, leading to high rates of husband-to-wife transmission. Gender-responsive health policies in Papua must include programs for women's economic empowerment and education for adult men. This social transformation will take time, but without addressing the sociocultural roots of the problem, HIV prevention programs will only address the clinical symptoms without addressing the sources of transmission (Handayani et al., 2023).

This book emphasizes that Papua needs a "Special Handling Scheme" within the national health policy. This scheme should include risk insurance for health workers working in conflict areas, state-guaranteed air logistics

subsidies, and formal recognition of the role of churches and traditional institutions in the health referral system. By positioning Papua as a priority case study, we learn that effective health policies are those that have a "heart" and understand the pulse of local communities. Papua is more than just prevalence figures; it is a reflection of the extent to which the state is present for its most difficult-to-reach people.

Case Study 3: Urban Complexity in Jakarta

As the nation's capital and economic center, Jakarta faces highly complex HIV challenges that differ significantly from those faced by Papua. In Jakarta, the epidemic is concentrated among key populations with high mobility. Jakarta boasts the most comprehensive healthcare facilities and the largest number of skilled workers in Indonesia, but the main barriers here are intense social stigma and an anonymous urban lifestyle. Many people living with HIV in Jakarta prefer to "disappear" from the public service system due to fear of discrimination in the workplace or social settings. A metropolitan bias in policy often assumes that because facilities are readily available, access is no longer an issue,

when in fact, psychosocial barriers are more prevalent here (Sukmaningrum et al., 2024).

Jakarta is also a magnet for internal migration. Many people from various provinces come to Jakarta to seek treatment for privacy reasons or because facilities in their home areas are inadequate. This results in a very high burden on referral hospitals in Jakarta (such as RSPI Sulianti Saroso or RSUPN Cipto Mangunkusumo). Urban health policies must be able to manage this "cross-border patient" phenomenon through seamless national data integration. Furthermore, Jakarta has significant potential for private sector involvement. Many large companies operate independent clinics, but integrating these private clinics into the national HIV reporting system still faces administrative and data confidentiality challenges.

Another unique challenge in Jakarta is the "Hidden Epidemic" phenomenon in densely populated residential areas and luxury apartment complexes. The middle and upper classes often access healthcare through private channels, which are not monitored by government surveillance. This distorts real prevalence data. Policy reorientation in Jakarta should focus on strengthening partnerships between the government and private healthcare providers, including app-based healthcare

startups. HIV self-testing services and online courier drug delivery have a significantly greater chance of success in Jakarta compared to other regions due to the support of a well-established digital infrastructure (Siregar et al., 2025).

However, despite its magnificent infrastructure, Jakarta also harbors pockets of urban poverty where healthcare access remains very low. In slum areas along railway lines or under bridges, marginalized groups such as sex workers and injecting drug users still struggle to penetrate the sometimes stigmatizing bureaucratic barriers of Community Health Centers (Puskesmas). Responsive public health governance in Jakarta must be able to provide "radically inclusive" services, for example, through the activation of mobile Community Health Centers (Puskesmas) operating at night or providing accessible healthcare services for transgender people, who often face identity barriers when accessing the National Health Insurance.

Furthermore, Jakarta must be a pioneer in utilizing Big Data to mitigate the spread of HIV. By utilizing population mobility data from public transportation providers and integrating SATUSEHAT data, the provincial government can more precisely map high-risk

areas. The "Smart Health" strategy, integrated into the Smart City concept, enables an early warning system for people living with HIV (PLHIV) regarding scheduled check-ups or medication availability at the nearest pharmacy. Jakarta has all the technological prerequisites to become a model for urban HIV management in Southeast Asia, provided there is the political will to break down bureaucratic barriers and stigma.

The Jakarta case study teaches that the availability of medical facilities is only half the solution. The remaining half lies in creating a social and policy environment that supports patient dignity. The "Jakarta Zero Stigma" policy must be implemented systematically, not just through a social media campaign. This includes sensitivity training for all civil servants (ASN) and strong legal protections for workers discriminated against because of their HIV status. Jakarta is a vast laboratory where public health policy theories are tested amidst the currents of modernity and intense social complexity.

Case Study 4: Health Resilience in Border Areas (NTT)

Indonesia's land border areas, such as Kalimantan (bordering Malaysia) and East Nusa Tenggara (bordering Timor Leste), present unique transnational health policy challenges. Population mobility in these regions is highly fluid; residents frequently cross borders daily for business, family, or to seek healthcare. In the context of HIV, this creates challenges in terms of treatment continuity. An Indonesian patient might begin ARV therapy at a clinic in Malaysia because they work there, but upon returning to Indonesia, they struggle to continue therapy due to differences in drug regimens or the lack of a cross-border referral system (Prasetyo, 2023).

In North and West Kalimantan, the economic corridors of palm oil plantations and mining along the borders have become new hotspots for transmission. Migrant workers living far from their families are often the most vulnerable group. Health policies in border areas must be proactive by strengthening community health centers at cross-border points (PLBN - Pos Lintas Batas Negara). Strengthening healthcare services at the border is not only a humanitarian issue, but also a matter of national health security to prevent the entry of drug-resistant virus variants from abroad. Harmonization of treatment protocols between Indonesia and neighboring countries is urgently needed through health diplomacy.

Meanwhile, in the border region of East Nusa Tenggara (NTT) and Timor Leste, the main challenges are structural poverty and sharp infrastructure disparities. Many Timorese cross into Indonesian territory (such as in Atambua Regency) to seek healthcare services because facilities on the Indonesian side are perceived as more comprehensive. This places an additional burden on the already limited regional health budgets along the Indonesian border. Responsive governance in border areas requires dedicated deconcentrated funds from the central government to offset the costs of services for cross-border patients. Without central budget support, the quality of care for residents will also decline due to limited resources.

Beyond budgetary aspects, technical cooperation in data surveillance must be strengthened. A mechanism for exchanging anonymized data on epidemic trends in border areas is needed to jointly anticipate a surge in cases. Prevention programs must also be implemented collaboratively, for example, through bilingual education campaigns reaching communities on both sides of the border. Border regions are the nation's "front porch"; the quality of health services here reflects the nation's dignity. Public health policies at the border must transform the

face of the border from a neglected region to one that is resilient and resistant to health threats.

In conclusion, from this regional case study, we see that Indonesia cannot be managed with uniform policies. Geographic, sociocultural, and economic diversity demands measured policy flexibility. Papua teaches us the importance of geographic equity and cultural sensitivity; Jakarta demonstrates the urgency of de-stigmatization and urban technology integration; while border regions remind us of the importance of health diplomacy and cross-border cooperation. The synthesis of these three realities confirms that the future of HIV/AIDS policy in Indonesia lies in our ability to "localize national strategy."

Inclusive and adaptive policy transformation is an effort to stitch the pieces of this regional reality into a unified, equitable health system. The challenges ahead will be greater, but with a strong foundation of empirical data and a moral commitment to humanity, the 2030 elimination target remains within reach. This book concludes this case study chapter with the conviction that Indonesia's health sovereignty begins with our commitment to those in the most difficult, poorest, and most marginalized areas. This is the essence of rethinking

public health policy: returning the state to its people through equitable and dignified health services.

Case Study 5: Bali as an Epicenter of International Tourism

Bali Province is a region in Indonesia with highly dynamic and complex epidemiological characteristics. As a world-class tourism destination, Bali faces dual challenges: maintaining its image as a safe island for tourists while managing an HIV prevalence that has historically been among the highest in Indonesia. Bali's massive global mobility creates an ecosystem where residents, migrant workers from various provinces, and foreign tourists interact intensely. This situation demands highly sophisticated public health policies that integrate modern medical services with strong traditional social structures. Bali serves as both a successful example and a laboratory for challenges in integrating community-based services (KPA Bali, 2024).

One of Bali's policy strengths is the strengthening of the AIDS Commission (KPA) at the provincial and district levels, which enjoys strong autonomy and political support. Bali has successfully adopted a "health-friendly

tourism" approach, where HIV testing and education services are decentralized to entertainment areas without being perceived as punitive. However, the biggest challenge remains the social stigma that is deeply rooted in rural agrarian communities. The contrast between the openness of tourist destinations like Kuta and Seminyak and the conservatism of rural areas creates a significant disparity in psychosocial access for local people living with HIV. Policy reorientation in Bali must bridge these two social realities through a culturally inclusive approach.

A prominent policy innovation in Bali is the involvement of the Banjar system (traditional village-level organizations) in public health programs. Banjars have very strong social ties and are effective for mass mobilization. In the context of HIV, several villages in Bali have begun integrating health education into regular Banjar meetings, although this process faces significant obstacles due to cultural taboos. Responsive health policies in Bali utilize these traditional structures not only for outreach but also to provide social support for people living with HIV to prevent isolation from their traditional communities. The integration of customary law (Awig-awig) with national health protocols is a tangible manifestation of local wisdom that can strengthen the

resilience of the local health system (Wulandari et al., 2023).

Furthermore, Bali faces unique challenges in providing services to foreign nationals (WNA) who reside or visit for extended periods. Many foreign nationals are reluctant to access services at government hospitals due to language barriers or fears of deportation if their HIV status is revealed. This has led to the emergence of private clinics and international foundations that provide anonymous services.

National policy needs to provide a clearer regulatory framework regarding the treatment status of foreign nationals in Indonesia, including coordinating international health insurance with the national ARV drug supply system. Bali serves as a model for other Indonesian tourism destinations, such as Labuan Bajo and Mandalika, in preparing a healthcare infrastructure ready to cope with the dynamics of global mobility without neglecting the protection of vulnerable local populations.

Analysis of medication adherence data in Bali shows relatively good rates compared to the national average, largely driven by a strong network of Peer Support Groups (PSGs). However, the sustainability of

PSG funding in Bali is currently undergoing a critical transition due to the reduction in international donor funding. The Bali Provincial Government must immediately formulate a sustainable financing scheme through the regional budget or in partnership with the tourism industry. Imposing a "Tourism Tax" allocated in part for public health resilience could be an innovative solution worth considering. This strategy would ensure that economic growth from the tourism sector directly contributes to the health protection of residents most impacted by the industry's dynamics.

The conclusions of the Bali case study emphasize that HIV policy in tourism areas should not be separated from regional economic development strategies. Transparency of health data will not harm tourism if managed with intelligent and professional public communication. Conversely, a robust healthcare system will actually enhance a region's tourism image. Bali demonstrates that with a combination of strong political commitment, technological innovation, and respect for local cultural structures, a region can withstand a heavy epidemiological burden while remaining a driving force for the national economy. Bali's lessons are about how to transform the challenges of global mobility into

opportunities to build an inclusive and progressive healthcare system.

Case Study 6: Crisis Behind Bars: HIV Governance in Correctional Facilities

Correctional facilities and detention centers in Indonesia are environments with a very high risk of HIV transmission due to overcrowding and difficult-to-control risky behavior. Sociologically, prisons are a "microcosm" of society that is often overlooked in national health planning. Many inmates enter the correctional system with undiagnosed HIV status, while others become infected in prison through shared injection drug use or unsafe sexual intercourse. The unequal access to healthcare between the general population and inmates constitutes a form of systemic injustice that requires highly specific, human rights-based policy interventions (Directorate General of Corrections, 2025).

The implementation of the "Test and Treat" policy within prisons faces significant infrastructure and security challenges. Clinics within prisons often lack adequate laboratory facilities or healthcare personnel certified for HIV management. Furthermore, security procedures often

delay the process of referring inmates to general hospitals when emergency medical complications arise. Responsive public health policies must transcend prison walls by providing outreach services through mobile clinics and strengthening the prison's internal medical capacity. Ensuring access to ARV treatment for inmates is not only a health issue, but also a fundamental human right for those whose liberty is deprived but whose right to life remains protected by the state.

One of the most crucial issues in HIV management in prisons is the disruption of continuity of care upon release. Many people living with HIV receive regular treatment in prison but lose access soon after returning to society due to stigma, loss of legal identification, or lack of family support. This phenomenon leads to very high rates of drug withdrawal (LTFU) among former inmates, ultimately increasing the risk of drug resistance and death. Policy reorientation should include a "Health Transition Program," where prisons coordinate with community health centers (Puskesmas) in inmates' home regions at least three months before release to ensure smooth treatment referrals.

In addition to treatment, harm reduction programs within prisons remain a controversial yet essential issue.

Although drug use is strictly prohibited, the reality on the ground shows that transmission through injecting needles still occurs. Solely punitive policies have proven unsuccessful in reducing transmission rates. Several pilot prisons in Indonesia have begun adopting methadone maintenance therapy (MTRM) programs, but their reach remains very limited. The author argues that the government must have the political courage to view prisons as strategic health intervention sites. If we fail to manage HIV within prisons, they will become receptacles for the virus when inmates return to society, ultimately burdening the national health system as a whole.

Psychosocial challenges within prisons should also not be overlooked. Internal stigma among inmates can lead to physical violence or isolation among people living with HIV within their cells. Mental health support and Peer Support Groups (PSGs) within prisons are crucial for maintaining inmates' morale. National strategies should encourage the formation of health cadres from among inmates themselves, trained to provide education and support to their peers. This "peer education" approach has proven more effective in breaking through the barrier of prison subculture, which is often closed to official officials. By empowering

inmates as health agents, we are building the foundation for their more dignified social rehabilitation.

Administratively, integrating inmate health data into the national SATUSEHAT system is urgent. Often, prison medical records remain manual and separate from the national system, so when inmates are transferred between prisons, their treatment records are often lost. Digitizing health management in correctional settings will ensure budget transparency and accurate drug logistics. In conclusion, managing HIV in prisons is a test of the humanitarian integrity of our legal system. Prisons should not become a second "death sentence" for people living with HIV through medical neglect. Inclusive policies must ensure that prison doors do not become closed doors to citizens' health rights.

Case Study 7: Maritime Sector and Coastal Communities

As the world's largest archipelagic nation, Indonesia has millions of people living and working at sea, from traditional fishermen and merchant mariners to workers in transit ports. These maritime communities face unique HIV vulnerabilities due to high mobility patterns,

prolonged social isolation from family, and limited access to onshore health facilities. Major Indonesian ports often become transmission hotspots due to the growth of the adult entertainment industry catering to seafarers. However, public health policies often suffer from "maritime blindness," where intervention strategies focus primarily on static onshore populations, while neglecting the constantly mobile population at sea (Ministry of Transportation & Ministry of Health, 2024).

A major challenge in the maritime sector is the logistics of treatment and clinical monitoring. A seafarer diagnosed with HIV may be at sea for months, making short-term (one-month) drug policies ineffective. The implementation of Multi-Month Dispensing (MMD) for six months is crucial for this group. Furthermore, the lack of laboratory services on large ships or in small ports on outer islands causes delays in viral load monitoring. Policy reorientation should encourage the establishment of "Floating Clinics" or the integration of HIV services into Port Health Offices (KKP), with reach extending to the ship. Maritime health resilience is a key component of Indonesia's maritime sovereignty.

Communication strategies in coastal communities must also be tailored to the cultural characteristics of

fishing communities. Formal clinic approaches are often unpopular with fishermen who have irregular working hours. Services must be proactive, reaching the dock or fish auction site (TPI). Furthermore, the role of ship captains and ship owners as employers is crucial in ensuring access to healthcare for crew members. An "HIV at Sea" policy should be incorporated into maritime occupational safety standards, requiring every ship to have emergency medical procedures for crew with chronic illnesses and ensuring non-discrimination in seafarer employment contracts based on HIV status.

Digital innovation through maritime telemedicine offers a smart solution for seafarers in international waters or far from land. Through satellite connections, seafarers can consult with doctors on land regarding the management of medication side effects or mental health issues arising from isolation at sea. However, expensive satellite internet remains a barrier for small-scale fishers. The government needs to provide free Wi-Fi infrastructure at transit ports and fishing piers as a gateway for digital health services. By virtually connecting seafarers to onshore health systems, we are shortening the geographical distance that has long been a barrier to their quality of life.

Analysis of HIV transmission patterns in coastal communities shows that inter-island mobility often acts as a bridge for inter-regional transmission of the virus. Seafarers often become "patients without a fixed address" who are difficult to track by specific community health centers. Therefore, a flexible national referral system is needed, where seafarers can obtain ARV medication at any port simply by showing a digital identity card. A "Boundary-Free Service" policy for mobile populations must be a priority in the transformation of public health governance in Indonesia. The maritime sector is not only an economic sector, but also a living space that must ensure health equity.

GLOSARIUM

A

Acquired Immunodeficiency Syndrome (AIDS): An advanced stage of HIV infection, in which the immune system has been severely damaged, leaving individuals highly susceptible to various opportunistic infections and certain cancers.

Adherence: The patient's level of discipline in following the prescribed treatment regimen, including dosage, timing, and other specific instructions, is crucial for the success of ARV therapy.

Antiretroviral (ARV): A type of medication used to inhibit the replication of HIV in the human body. ARVs are not a cure, but they can suppress the viral load to undetectable levels, allowing the immune system to recover.

B

Health Big Data: A collection of vast and complex health data from multiple sources (electronic medical records, insurance claims, surveillance) that is processed to identify epidemiological patterns and improve the quality of care.

Catastrophic Costs: Excessive household healthcare expenditures (typically exceeding 10% or 25% of total income/expenses) that threaten a family's ability to meet other basic needs.

Burnout: A state of emotional, physical, and mental exhaustion caused by excessive and prolonged work stress, often experienced by healthcare workers in HIV/AIDS care.

C

CD4 (Cluster of Differentiation 4): A type of white blood cell (T lymphocyte) that is the primary target of HIV. The CD4 count in the blood is used

as an indicator of the strength of a patient's immune system.

Cold Chain: A logistics distribution system that maintains stable temperatures during the shipping and storage of sensitive medical products (such as laboratory reagents) to maintain their effectiveness.

D

Deconcentration of Services: The delegation of authority and functions for health services from the central or district level to lower levels (such as villages) to bring services closer to the community.

Health Decentralization: The transfer of responsibility and authority for managing the health sector from the central government to regional governments (provinces and districts/cities) in accordance with the spirit of regional autonomy.

Social Determinants of Health: The environmental conditions in which people are born, grow, live, work, and age, which influence their health status and risk of disease.

Geographic Disparities: Gaps in the availability, affordability, and quality of health services caused

by differences in geographic location and regional infrastructure.

E

Social Exclusion: The process by which individuals or groups are marginalized from fully participating in the social, economic, and political life of society, often experienced by people living with HIV due to stigma.

HIV Elimination: The global public health target to stop new HIV transmissions and ensure that people living with HIV can live healthy lives without symptoms of AIDS, set to be achieved by 2030.

F

Fast-Track 95-95-95: UNAIDS' ambitious target that by 2030, 95% of people living with HIV (PLHIV) will know their status, 95% will be on treatment, and 95% of those on treatment will achieve viral suppression.

G

Gender-Blind: Policies or practices that ignore the different needs, roles, and challenges faced by men, women, and other gender identities, thereby risking perpetuating inequality.

Greater Involvement of People Living with HIV/AIDS (GIPA): A principle that emphasizes the active and meaningful participation of people living with HIV in all stages of planning, implementing, and evaluating policies that affect their lives.

I

Human Development Index (HDI): A measure of human development achievements based on three basic dimensions: a long and healthy life, knowledge, and a decent standard of living.

Opportunistic Infections: Infections that arise due to a weakened immune system, which usually do not cause disease in people with normal immune systems.

K

Eastern Indonesia (KTI): A geographical region of Indonesia encompassing Sulawesi, Nusa Tenggara, Maluku, and Papua, which often faces greater challenges in health development and infrastructure.

Peer Support Groups (PSGs): Community-based organizations comprised of people living with HIV (PLHIV) who provide emotional support, information, and treatment assistance.

L

Lost to Follow-Up (LTFU): A condition in which an HIV patient who was previously on treatment stops visiting a health facility for a certain period of time (usually more than 3 months) without a clear reason.

M

Resource Maldistribution: The uneven distribution of healthcare workers, with overcrowding in certain areas (urban areas/Java) and acute shortages in others (rural areas/outside Java).

mHealth (Mobile Health): Medical and public health practices supported by mobile devices, such as mobile phones, tablets, and other wireless devices.

Multi-Month Dispensing (MMD): The policy of dispensing ARV drugs for several months (3-6 months) at a time to stable patients to reduce the frequency of visits to healthcare facilities.

O

People Living with HIV (PLHIV): A more humane and less stigmatizing term for individuals living with HIV, replacing the term "sufferer."

Out-of-Pocket (OOP): Healthcare costs paid directly by the patient or family at the time of service, not covered by insurance or the government.

P

Point-of-Care Testing (POCT): Laboratory testing performed near or at the patient's location, providing rapid results to support immediate clinical decision-making.

Provider-Initiated Testing and Counseling (PITC): HIV testing initiated by a healthcare provider for patients presenting to a healthcare facility with specific symptoms or medical conditions.

S

Internal Stigma: A condition in which PLHIV internalize society's negative views of them, causing decreased self-esteem and fear of seeking help.

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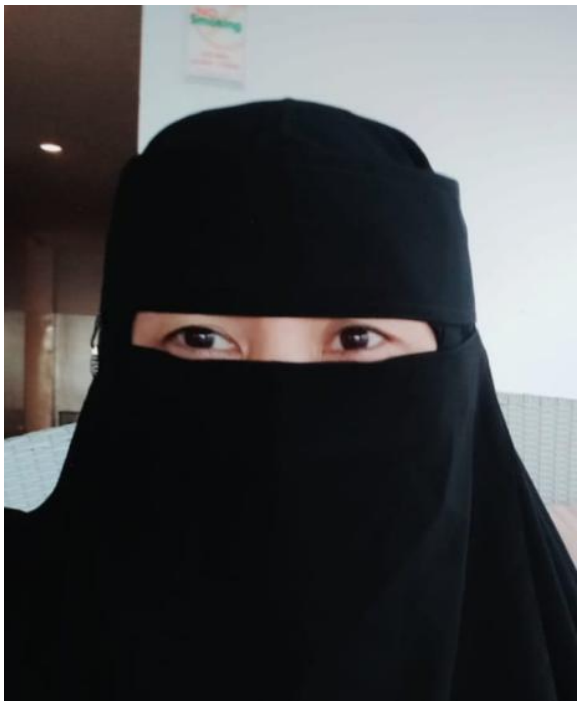
BIOGRAPHY

DR. Nana Noviana, S.ST., M.Kes., C.MT., CIQaR, CPSG. Born in Banjarmasin on January 10th. Currently, the author works

at the Regional Research and Innovation Agency of South Kalimantan Province as a researcher with expertise in public health and as a part-time lecturer. The author completed a master's degree in health promotion at Diponegoro University, Semarang, specializing in reproductive health and HIV/AIDS in 2012. In 2019, the author completed a doctorate in public administration at Diponegoro University, Semarang. In 2021, the author received a scientific research award from the Research Culture Society/Scientific Research Association Global Awards, and in 2022, his research proposal received the Brennaff Premium 1 billion Grant for Researchers Awards.



Dr. Lisda Noorizatil Hasanah, SP, MP, CIQaR, Born in Banjarmasin on November 10, 1981. The fourth child of Drs. H. Sain (late) and Hj. Noormaina (late). Education taken was SDN Kebun Bunga 9 Banjarmasin, graduated in 1993, SMPN 7 Banjarmasin, graduated in 1996, and Science major SMAN 7 Banjarmasin, graduated in 1999. He completed his undergraduate education in 1999 in the Agricultural Socio-Economic Study Program, Faculty of Agriculture, Lambung Mangkurat

University, and graduated in 2003. Continuing his undergraduate education in the Agricultural Economics Study Program, Postgraduate Program, Lambung Mangkurat University, he entered in 2003 and graduated in 2005. His undergraduate education was continued in 2017, and he graduated in 2023 in the Doctoral Study Program (S3) in Agricultural Science, Lambung Mangkurat University, Banjarbaru. Work experience as a Civil Servant/ASN with a Functional Position of Researcher at the Regional Research and Development Agency of South Kalimantan Province from 2006 until now, which changed its name to the Regional Research and Innovation Agency of South Kalimantan Province. Married to Andrie Budiman in 2008 and blessed with 3 children, namely Annisa Qonita Puteri, born in 2013, and in 2014 gave birth to twins, Muhammad Hasan Budiman and Muhammad Husein Budiman.

Ir. M. Arief Anwar, ST, MT, is a researcher at the Regional Research and Innovation Agency of South Kalimantan Province in the field of public policy who has worked for

more than 15 years. Born in Banjarbaru on December 24, 1980, he studied Civil Engineering at Lambung Mangkurat University, and continued his Master's studies at the Sepuluh November Institute of Technology Surabaya, and obtained an Engineering degree in the ULM Professional Engineer Program. M. Arief Anwar's research focus is in the field of public policy research, with more than 30 studies that have been conducted, including as a member of the HIV-AIDS policy implementation study team in South Kalimantan.