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Study Report

Foresight to Structuring the Future of Indonesia's Primary Health Care

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List of Abbreviations

AAUPB	General Principles of Good Governance
MMR	Maternal Mortality Rate
APBD	Regional Revenue and Expenditure Budget
APBN	National Revenue and Expenditure Budget
BLUD	Regional Public Service
Bappenas	National Development Planning Agency
BOK	Health Operational Assistance
BPJS	Social Security Administration Agency
BPP	Puskesmas Support Agency
BPS	Central Statistics Agency
BUK	Health Measures Management
COVID	Coronavirus Disease
CSO	Civil Society Organizations/Civil Society Organizations
DAK	Special Allocation Fund
DAU	General Allocation Fund
DBD	Dengue Fever
DID	Regional Incentive Funds
DLP	Primary Service Doctors
DNA	Discourse Network Analysis
DPR	House of Representatives
DTPK	Disadvantaged Regions, Borders and Islands
FCTC	Framework Convention on Tobacco Control
FKTP	First Level Health Facilities
GDP	Gross Domestic Product
HKPD	Financial Relations between Central and Regional Governments
ILO	International Labor Organization
JKN	National Health Insurance
INA CBGs	Indonesia Case-based Groups (diagnosis-related groups)
KBK	Capitation Based on Performance
KBKR	Family Planning and Reproductive Health
KEK	Chronic energy shortage
Kemendagri	The Ministry of Home Affairs
Kemenkes	Ministry of Health
MCH	Maternal and Child Health
KPI	Key Performance Index
KPK	Corruption Eradication Commission
LMIC	Low-to-Middle-Income Country
MDGs	Millennium Development Goals
MSS/SPM	Minimum Service Standards/*Standar Pelayanan Minimum*
OOP	Out-of-pocket

PAD	Local Revenue
PC	Primary Care
Perpres	Presidential Regulation
PHBS	Clean and Healthy Lifestyle
PHC	Primary Health Care
PIS-PK	Healthy Indonesia Program with Family Approach
PMK	Minister of Health Regulation
Posyandu	Integrated Service Post
Prolanis	Chronic Disease Management Program
Puskesmas	Public Health Center
PPP	Purchasing Power Parity
RPJMD	Regional Medium Term Development Plan
RPJMN	National Medium-Term Development Plan
SDGs	Sustainable Development Goals
SDM	*Sumber Daya Manusia* = Human Resources/ Workforce
SJSN	National Social Security System
TKDD	Transfers to Regions and Village Funds
UHC	Universal Health Coverage
UKM	Public Health Measures
UKP	Individual Health Measures
UNICEF	United Nations Children's Fund
UNRISD	United Nations Research Institute for Social Development
WHA	World Health Assembly
WHO	World Health Organization

Glossary

Buffer Stock	The method used to maintain the stability of very fluctuate market prices
Catchment area	The geographic area for which a facility attracts clients or customers.
Community Health Measures	Hereinafter abbreviated as UKM, it refers to any activity to maintain and improve health as well as prevent and overcome health issues targeted at families, groups, and communities.
Cost-based perspective	Pricing method based on a product's production, manufacturing, and distribution costs
E-catalog	An electronic information system containing lists, types, technical specifications, and prices of certain goods/services from various government goods/service providers.
Fee-for-service	A payment model in which services are not bundled and paid for separately. It can also be interpreted as a retrospective hospital payment method, where payment is determined after health services are provided
Fiscal	All matters relating to taxes or state income
Formulary	List of drugs used for certain therapies made by the state, local government or hospital
Generic drugs	Drugs that have the same active ingredient content as patented drugs, also in terms of use and formulation
Horizontal referral system	Referrals carried out between health services at the same level if the referring health facility is unable to provide health services according to the patient's needs due to permanent or temporary limitation in facilities, equipment, and/or workforce
Individual Health Measures	Hereinafter abbreviated as UKP, it refers to an activity and/or a series of health service activities aimed at improving, preventing, curing diseases, reducing suffering due to diseases, and restoring individual health.

Out-of-pocket	Additional costs that must be incurred in advance by a person in order to carry out business duties as a fulfillment of a fee that must be paid; afterwards the reimbursement is requested from the company. In the context of JKN, participants who receive health services are expected to pay for health expenditures out of their own pocket.
PCare	Primary Care, BPJS Health's website application that is used for COVID-19 vaccination's data collection, registration, screening, target verification, and record keeping.
Status quo	A current and ongoing condition
Telemedicine	Online medical services that allow doctors or medical personnel to provide health services remotely
Vertical referral system	Referrals carried out between different levels of health services, may it be from a lower level of service to a higher, or vice versa

Foreword

The Indonesian Academy of Sciences (*Akademi Ilmu Pengetahuan Indonesia*-AIPI) and the Center for Indonesia's Strategic Development Initiatives (CISDI) collaborated to conduct a study and publish a report entitled **"Foresight to Structuring the Future of Indonesia's Primary Health Care".** The study was carried out with the aim of providing recommended policy directions for the Government and as a reference for other stakeholders. This study examines the condition of Indonesia's health policies, particularly in the national health system and primary health care, from before the pandemic until it took place and the consequent policy improvements required in the future.

This study formulates recommendations for policy improvement as we enter the third year of the pandemic. These recommendations are based on global and regional scientific evidence as well as explicit and implicit knowledge gained from experience working at national, sub-national and grassroots levels.

Prof. Dr. Dr. Med Akmal Taher SpU(K), dr, a member of the Indonesian Academy of Sciences' Commission for Medical Sciences (*Komisi Ilmu Kedokteran Akademi Ilmu Pengetahuan Indonesia*- KIK-AIPI), acted as the convener the study. The research process was carried out from April to November 2021 and went through an analysis and writing process from December 2021 – March 2022. The research, analysis and report writing were carried out by a team led by Diah Satyani Saminarsih and consisted of Prof. Dr. Dr. Med Akmal Taher SpU(K), dr, Yurdhina Meilissa, Olivia Herlinda, Nadhira Febianisari, Reyhan Alemmario and Rina Chomawati. Rudra Ardiyase as the members, with Dedi Suhendi managing the design and layout of the report. The document dissemination concept was designed and implemented by Sadika Hamid, Iman Mahaputra Zein, Stella Yovita Arya Putri, Bagus Fachrudi, Naufal Randhika, Amru Sebayang, Zenithesa Gifta Nadirini, and the CISDI Communication Team.

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Executive Summary

Still, I shall be claiming with a sigh
Somewhere ages and ages:
Two roads diverged in a wood, and
I took the one less traveled by.
And that has made all the difference
— **Robert Frost**

At least since the Alma Ata Declaration in 1978, the world has identified the strategic role of primary health care (PHC) in the health system. Unfortunately, however, many countries remain unsuccessful, or at least have to go through a prolonged process, to fully set policy directions and strong commitments for primary health care. The delivery of qualified services often fails, even though evidence of its superiority has been collected for decades from various countries in the world. The COVID-19 pandemic has brought awareness that we have never really succeeded in building a health system with strong PHC fundamentals. In fact, a strong health system and its function as a front line of defense to ensure the health status of the community is very much needed; especially nowadays.

Structural and transformative changes with long-term goals are needed. Not only to overcome the pandemic but also to ensure that after it passes; the health system, especially the PHC, is in a "new normal"[1] state that is decidedly better than the pre pandemic condition.

The study employed the foresight[2] methodology with the aim to extensively, strategically and objectively collect various available pieces of evidence; collect, record and map as many inputs from the public and expert resource persons as possible; and identify the inter-sectoral interrelationships as factors that enable the research team to fully understand and analyze past and present conditions. Based on this mapping, the research team then strategically examined events and reflected on the key drivers – trends – main challenges that mark Indonesia's primary health care policy. Subsequently, four equally plausible scenarios were developed. The scenarios aim to show the possibilities of future events, map out various approaches that can be taken, and ultimately provide the right direction for primary health care policies to policy makers at the national and sub-national levels; and various development actors, including activists and civil society organizations. By using the foresight

[1] The term new normal (*new normal*) refers to the new order of health institutions.
[2] Foresight is the use of various methodologies including analysis of key trends and development of scenarios to reveal and discuss possibilities and ideas about the future.

method, the policy recommendations generated by this study can appropriately address the structural challenges that have hindered the delivery of transformative PHC.

The advantages of PHC are no longer in question. However, what needs to be adjusted so that PHC can respond to the public's demand for accessible and quality health services?

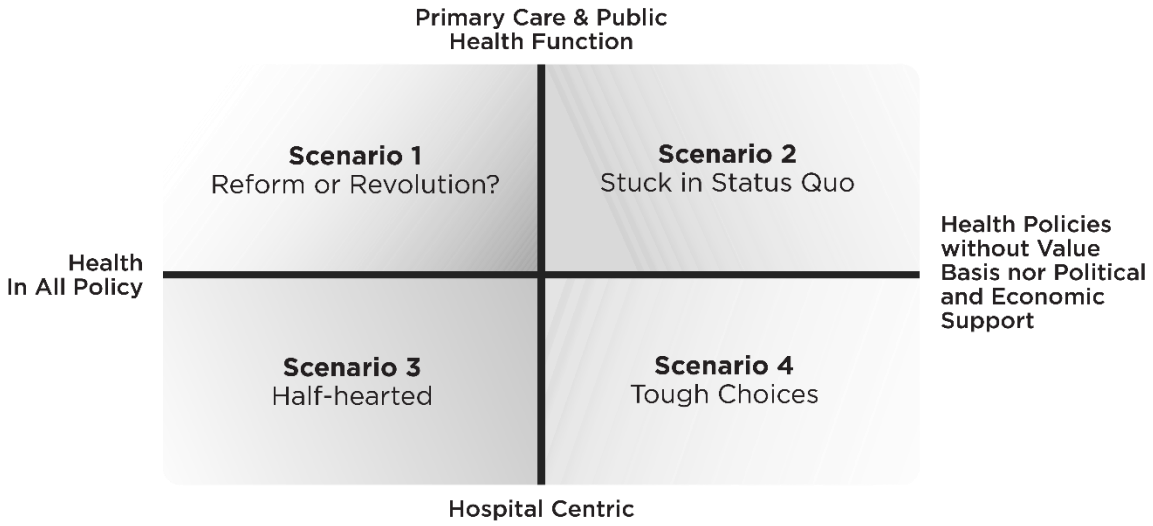


Chart 1. PHC Foresight Scenario Quadrants

1: Reform or Revolution?

One of the characteristics of this scenario is reflected in its governance. The government has drastically started implementing the merit system in managing governance in a manner that pays attention to consequences. From the national health policy perspective, this means managing the interaction between the political wing in the Presidential Secretariat Office and the technocratic wing under the coordination of the Coordinating Ministry for Human Development and Culture (Kemenko PMK).

Scenario 2: Trapped in the "Status Quo"

Entering the third year of the pandemic, people are not afforded with the hope for a new living situation that can save their lives. Based on the situation during the pandemic, this scenario also illustrates that under the "status quo" conditions, policies outside the health sector that are very influential in achieving development targets will rely more on short-term economic profit/loss calculations.

Scenario 3: Half-hearted

The main characteristic of this scenario is the partial implementation of a program from the policy that generates it to the activities that follow. In addition, the maneuvers in a policy's implementation seem only to be limited to the state apparatus, not extending to the wider community. From the perspective of health services delivery, although there appears to be

efforts towards health in all policies, hospital centric measures remain more dominant than educational and preventive efforts that are carried out systematically at the PHC. In the end, "health in all policies" remains to be mere slogan/rhetoric and never really materialized.

Scenario 4: Tough Choices

This scenario illustrates the condition if the government and parliamentary policies turn health care into a luxury, without considering readiness in fending off the icebergs that lie ahead, such as pandemics or other health emergencies in the future.

There are three transformative shifts that must occur:

1. **A shift of perspectives from fulfilling access to fulfilling access and quality.**
   The public demand for quality health care increases, in accordance with the development of a health system that is centered on individual needs (people-centered). Included in the transformative PHC is its ability to provide health services without access and quality restrictions, equipped with the latest health technology, yet remains affordable.

2. **The shift from fragmentation to integration**
   The public often experiences fragmented health services, such as a referral system that is not working and/or the gap between services in government-owned and private facilities. Oftentimes, within a PHC itself, there is a division between preventive promotive services and curative ones. Future PHCs must be able to integrate all elements of comprehensive services. The best way is through the placement of health workers who work as a team and collaborate with the regional health cadres to answer health-related needs of the community.

3. **The shift from a short-term and reactive cost-based perspective to a long-term and sustainable perspective based on a long- term investment-based views**
   Transformative PHC requires policy makers to gradually shift their perspectives from regarding PHCs as cost-center to a long-term investment. Investments in PHC ensure that the long-term costs of addressing community morbidity are much lower. This is because all preventive measures and treatments carried out at the primary level are much cheaper than treatment at the referral level. In addition, in the long term, investment in PHC ensures justice is achieved and shows the government's alignment with vulnerable groups.

In order for the three shifts above to occur, this study provides an explanation and analysis of the five fundamental reforms that must occur, namely:

1. **Reform of leadership and governance**
   There is a need for higher/more binding regulations on the national health system, such as a law, given the reform of the national health system and PHC transformation will be a long-term endeavor which requires commensurate budget commitments.

2. **Public policy**
   a need for policy reform, not only directly related to health, but also to policies related to social, economic, commercial, and environmental determinants that affect various aspects of individual/community health.

3. **Service Model Reform**
   This reform is needed so that the community may access primary level health facilities with quality services. For this reason, improvement of the accreditation system for primary level health facilities that can objectively ensure the quality of services provided is absolutely necessary.

4. **Health Financing Reform**
   Health financing reform requires integration of supply-side and demand-side financing as well as public financial management reform to support better coordination, accountability, and performance orientation in public spending.

   Addressing the tariff gap between private sector service providers and the public sector will provide incentives to private First Level Health Facilities (FKTP) to increase diagnostic capacity and preventive promotive services. The redistribution of membership so that the National Health Insurance (JKN) participants are not concentrated in the Puskesmas will help build an ecosystem of quality health services at the FKTP level.

5. **Health Workforce Reform**
   This reform includes not only health workers, but also health cadres. Countries that have a strong PHC system have not only large numbers of health cadres, but also have highly qualified ones. A supportive environment must be established in order to optimize the labor market for health in the following three areas: education, incentive mechanisms and redistribution policies.

However, the five reforms above require two leveraging pillars, the first at the strategic level and the second at the operational. The levers are described as follows:

Strategic lever level (OECD, 2019):

1. **Political commitment and policy direction**
   Transformation must start from a change in perspective. PHC transformation is a long-term investment. Because of this perspective, policy alignment is needed from the National Medium-Term Development Plan (RPJMN) to the Strategic Plan and Action Plan and Ministry budget.

2. **Budget commitment**
   The APBN allocation for PHC is 0.05% of GDP. Meanwhile, based on WHO recommendations, a budget allocation of 1% of GDP is needed for the PHC transformation to be successful. In addition, ensuring that BPJS Health is able to carry out strategic spending, especially related to accreditation, credentialing, and contracting, will help ensure efficient and effective budget utilization.

3. **Community involvement.**
   The integration of public health cadres into the health workforce is key in structuring the future of PHC. Health cadres must have established standards of competence, performance, and career paths.

Operational leverage level (OECD, 2019):

1. **Use of big data and digital health facilities**
   Digital health technology is necessary to ensure the availability of quality data as operational input for policy making.

2. **PHC oriented research development**
   PHC transformation requires extensive research support and the development of a body of knowledge that is significantly more than currently available. Until now, at least in Indonesia, PHC and research on health systems have not become areas of great interest to researchers. In order to realize this, it is necessary to involve ministries outside the health sector, universities, and research institutions.

3. **Development of quality health workforce in the health sector with PHC as the priority.**
   The strategic role of quality health workforce is an indicator of the successful operation of the ideal scenario that has a balance between Primary Care and Public Health Functions. In the context of future planning, the Joint Committee of the Ministry of Health and the Ministry of Culture, Education and Research should get more expansive support in developing the policy of the Academic Health System so that developments and innovations are not only appropriate but also bring forth the innovations that are in fact inherent in that particular system. Through this system, it is hoped that there will be an increase in the number, quality, and distribution of health workers.

Chapter 1
Primary Health Care Context: What, Why and When is The Right Time For Transformation

"With the Declaration of Independence on August 17, 1945 the formation of a Government with its machine power (police and army), its territories and population, the Republic of Indonesia came into being. The Red-White flag was hoisted and the national anthem was heard in the smallest and most isolated places of Indonesia. It was previously gauged that this nation was going to face various difficulties if it was going to maintain its independence. These difficulties were felt in all fields of work, including Public Health, especially before the transfer of sovereignty on December 27, 1949. Yet, it may be said that the Indonesians during its early stage of independence showed a strong will to maintain its freedom amidst hardships and difficulties and no less did it show its courage to surmount the barriers during the transition period, also in the field of health."

— ***Johannes Leimena***

1.1. The urgency and chronology of the primary health care transformation during the pandemic

The COVID-19 pandemic has had a severe impact on the shock endured by the health system and simultaneously incurred huge economic losses – well above the normal threshold. In crisis as well as in ordinary circumstances, Primary Health Care (PHC) has been proven to provide an economical solution while saving human lives. However, successfully rebuilding and recovering from the crisis caused by the COVID-19 pandemic requires structural and fundamental changes to the health system (World Bank, 2021).

The impact of the pandemic is felt all over the world, including in Indonesia. Departing from concerns about the pandemic's impact, the Indonesian Academy of Sciences Commission for Medicine (KIK-AIPI) was motivated to conduct a study in order to provide policy recommendations to the Government, in accordance with its mandate. However, AIPI recognizes that extraordinary situations such as a pandemic require a different framework of approaches and methodologies. It is intended that the recommendations will map changes that may occur, in the midst of a situation full of uncertainty caused by the pandemic.

Before the study was conducted, KIK-AIPI had designed and approved the framework and scope of the study. KIK-AIPI is of the opinion that studies for PHC transformation must remain true to the evidence-based policy making principles that have been ingrained in AIPI. In addition, KIK-AIPI intends to provide policy recommendations that are not only used in the context of the pandemic response, but to go further than that, namely for comprehensive improvements in

the health policy's directions with a long-term perspective. The state of health policy before and during the pandemic will affect the situation after the pandemic concludes. The national health system reform triggered by the pandemic is actually based on what had transpired before the pandemic began. In line with that, these reforms also should not stop when the pandemic is over, but continue to be carried out until the health system's quality and readiness indicators are at a better point compared to conditions at the beginning of the pandemic.

AIPI's policy recommendations are targeted to be able to appropriately address the structural challenges faced by the national health system, especially in PHC. However, outside of the health sector, these recommendations can also accurately provide the appropriate policy direction and answer the required economic investment commitments and optimal community readiness. This is intended so that the national health system succeeds in being more resilient, ready to face the next pandemics; with transformative primary health care as the spearhead.

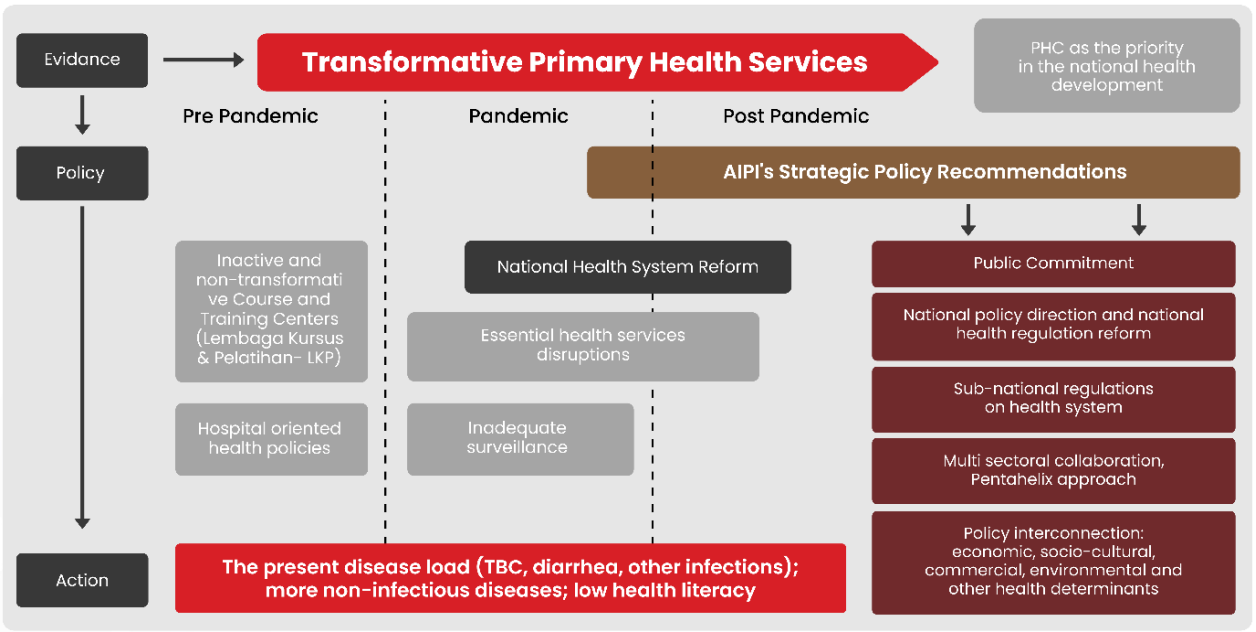


Chart 2. Framework for providing transformative PHC policy recommendations

1.2. Why is PHC important?

In this first chapter, the research team will provide background and understanding on the concept of Primary Health Care (PHC). In health policy, including the delivery of health services, services affordability is important. With the pressure and advancement of health technology, the cost of health services at the referral level (secondary and tertiary) continues to increase. Efficiency and success in medical sciences go hand in hand with increasing costs. Accessibility to technology is an issue, injustice and impartiality to the wider community who are not socio-economically advantaged remain to be the biggest challenges. Therefore, accessible and quality health services are the main advantages of PHC. Of course, PHC was not automatically established as a transformative, innovative, and just system. At first, PHC only addressed equal access to health services. However, as development progresses in health policy, with the health sector shifting to be at the center of overall development, transformative PHC (quality yet affordable) is the answer to the community's need for health services.

1.3. Global Context

PHC concept

The Primary Health Care (PHC) concept emerges from the awareness that health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. In addition, health is a fundamental human right and that the achievement of the highest possible level of health can be achieved through collective efforts, not only from the health sector, but also socially and economically (WHO, 2022a). This marks a shift in the concept of PHC from the traditional perspective that health is simply the absence of disease, to a broader perspective that health is influenced by many other determinants.

Primary Health Care (PHC) is the first and closest service at the community level. It provides essential health services based on practical, scientific principles, methods and technologies that are socially acceptable and universally accessible to individuals and communities through their full participation and without cost barriers (WHO, 1978). It is an integral part of the health system, which is the central function and main focus in human resource development. This concept evolves through a long process.

1.3.1. History of PHC (1930-1978)

1900-1930s - The concept of PHC studies was influenced by many individuals, the meeting process, as well as publications (Litsios, 2015). Allegedly there was also the influence of various developments from long before the early decades of the 20th century. Rural health programs in China were developed with the assistance of the Rockefeller Foundation and the League of Nations Health Organizations in the 1930s and there were several conferences which were held later in the process.

1937 - The League of Nations Health Organization conference held in Bandung, Indonesia, is considered to be one of the milestones in public health. The conference approached rural

health issues from an intersectoral and interagency perspective focusing not only on the need to improve access to modern medicine and public health, but also on the fundamental challenges of education, economic and social development (Brown & Fee, 2008).

1975 - The PHC concept was first proposed in a review to the WHO Executive Board in January 1975 in the form of seven principles for governments to follow in order to improve their health services. UNICEF's programmatic approach to basic services, the ILO's program on basic needs, and the UNRISD program on civil society provide models for development frameworks that align with the community focus in PHC (Freire, 1970; Ivan, 1973; Schumacher, 1973).

1978 - Primary health care was officially declared through the 1978 Alma Ata Declaration in Kazakhstan, where 134 WHA members of WHO ratified the Declaration (Litsios, 2015). For the first time, the world through WHO recognizes inequality in access to health, and therefore names the principle of "Health for All" as the main goal.

1.3.2. Evolution of PHC (1979-2018)

Ottawa Charter for Health Promotion (1986)

The PHC concept continued to evolve and develop in the following years. The 1978 Declaration was followed by an international conference for the promotion of health in Ottawa in 1986. This conference emphasized the means and efforts to achieve Health for All through the promotion of health. Health promotion is a process that enables people to improve health control and public health status (WHO, 2022b). An individual or group must be able to identify and realize aspirations, meet needs, and change the environment to achieve a state of holistic physical, mental and social well-being.

The switch to selective PHC (1993-2000)

In the process, the PHC concept cannot be separated from questions and challenges considering that it requires radical changes. While the PHC has revolutionized the way health is interpreted and the way health services and systems should work, the Alma Ata Declaration has been criticized for being too idealistic to achieve in an unrealistic time frame of providing access to healthcare for all before 2000. Many argue that it is more realistic to carry out PHC in a vertical approach, focusing on diseases in developing countries that have the highest prevalence and are most likely to be controlled (Rifkin, 2018).

Additionally, the world's global health is turning to the concept of neoliberalism as the dominant financing structure which is strongly supported by a report from the World Bank entitled Investing in Health (World Bank, 1993). This report recommends restructuring the health sector to focus on effective and cost-effective services with a minimal role for the state. WHO also launched a similar report entitled The World Health Report 2000: Health Systems; Improving Performance (WHO, 2000).

Millennium Development Goals (2000)

In the same year, the Millennium Development Goals (MDGs) were launched. Global health policy through the MDGs also indicates a shift from a comprehensive approach to PHC to a more vertical diseases-focused agenda (WHO, 2000), although many of these goals could have been achieved through strengthening the PHC level.

Social Determinants of Health (2000-2008)

In 2000, the World Development Report reemphasized efforts to reduce poverty and was focused on human and social determinants (World Bank, 2000). Several years later, WHO demonstrated its commitment through the establishment of the Commission on Social Determinants of Health in 2005 which aims to explore the relationship between health status and social determinants. The report finds that inequality in access to health services occurs due to various social and economic aspects and has an impact on health status. On the 30th anniversary of the Alma Ata Declaration in 2008, WHO published the World Health Report: Primary Health Care; Now More Than Ever (WHO, 2008a), which is pushing for reforms that include (a) universal health coverage to ensure equal access to health; (b) health services to ensure a more human-focused health system; (c) leadership to increase the accountability of health authorities; and (d) public policies to promote and protect public health.

Universal Health Coverage (2010)

In a situation of limited funding for health in the midst of many health problems, in 2010 WHO issued a World Health Report: Health System Financing; The Path to Universal Coverage, which places PHC as an important component to ensure all have equal access to quality health services without cost barriers (WHO, 2010).

Sustainable Development Goals (2015)

In 2015, the Sustainable Development Goals (SDGs) replaced the MDGs, specifically target 3 which includes achievement targets for comprehensive public health and welfare. The SDGs also place PHC as an indicator that must be achieved by countries (United Nations, 2022). The importance of PHC's presence to achieve these goals is increasingly being promoted to all countries.

Astana Declaration (2018)

Commemorating 40 years of PHC efforts and the Alma Ata Declaration, a Global Conference on PHC, namely the Astana Declaration, was held in 2018 which aims to re-emphasize the countries' focus on PHC. It also aims to ensure that everyone, wherever they may be, gets an equal opportunity for the highest possible standard of health. If the Alma Ata Declaration still focused on developing the PHC system, the Astana Declaration adopts a wider scope by acknowledging and emphasizing the importance of political commitment to PHC from various parties, starting from the government, NGOs, academics, and other organizations (Jungo, et al. ., 2020).

1.3.3. Primary Health Care and Primary Care

The history and evolution of the PHC concept is a lesson learned from the various experiments that have been carried out to translate the WHO definition of health into action. Primary Health Care (PHC) has changed the health paradigm from a definition of health that is limited to biomedical research, the provision of health services by professionals and hospitals, and also health centers, to a broader focus, which includes social determinants of health (Bhatia and Rifkin, 2013).). There are criticisms of this definition, which is considered to lack concrete guidance on how to implement its policies (Rifkin, 2018).

The definition of PHC also experienced a narrowing of meaning along the way. In the context of the health system, several stakeholders agreed to use a narrower definition, namely Primary Care (PC). The two terms, PHC and PC, are often used interchangeably to refer to the same meaning, but they often cause confusion.

Primary Health Care (PHC)

The WHO concept of PHC emphasizes the need to establish PHC in community life with their active participation; relying primarily on efficiently utilizing the available community resources; an integrated approach to preventive, curative and promotive services for the community and individuals; most practical interventions are carried out by trained health personnel; an integrated referral system; and aims to integrate PHC services with the services of other sectors involved in community development.

The Alma Ata Declaration (WHO, 1978) affirms that PHC has a mandate to:

1. Reflect and evolve according to the needs and conditions of the economic, sociocultural, and political characteristics of the country and community on an evidence-based basis,
2. Provide promotive, preventive, curative and rehabilitative services,
3. Include education, health promotion and disease prevention; supply of clean water and basic sanitation; maternal and child health, including family planning; immunization for infectious diseases; prevention and control of endemic diseases; appropriate treatment for underlying diseases; and availability of essential medicines.
4. Be multi-sectoral, especially those related to health and community development,
5. Require and promote the independence of communities and individuals and their participation in the planning, implementation and monitoring of PHC,
6. Maintain sustainability through an integrated, functional, and supportive referral system,
7. Depend on local and referral levels, such as on health workers, including doctors, nurses, midwives, networks and trained cadres who can work together as a health team that responds responsively to community health needs.

In the context of Indonesia, the closest definition to the concept of PHC is that of the community health center (*Pusat Kesehatan Masyarakat*-Puskesmas) in the Minister of Health Regulation No. 43 of 2019 on Puskesmas, namely health service facilities that manage first-level public health

measures (*upaya kesehatan masyarakat*-UKM)[3] and individual health measures (*upaya kesehatan perorangan*-UKP), by prioritizing promotive and preventive efforts in their working areas. To date, there is no specific policy umbrella in Indonesia yet.

Primary Care (PC)

Primary Care by definition has a narrower scope than PHC and tends to be limited to the provision of first-level services only. The definition itself varies depending on the different contexts and situations in each country. WHO defines PC as follows:

> *Primary care is a key process in the health system that provides promotive, protective, preventive, curative, rehabilitative and palliative services to the community. Primary Care is a service model that supports first-contact, accessible, ongoing, comprehensive, and coordinated care. Primary care aims to optimize population health and reduce disparities between populations by ensuring that (all) subgroups have equal access to services (WHO, 2022c).*

In the Indonesian context, Primary Care is the First Level Health Facility (*Fasilitas Kesehatan Tingkat Pertama*-FKTP), which according to the Minister of Health Regulation No. 71 of 2013 on Health Services in the National Health Insurance, is a non-specialistic (primary) individual health service, including outpatient and inpatient services. Health services included in the FKTP are Puskesmas, primary (*pratama*) clinics, doctor practices, dentist practices, primary care physician practices, primary class D hospitals, and their networks (i.e. labs and pharmacies, etc.).

1.3.4. The Relationship between Primary Health Care and Primary Care

To clarify the relationship between PHC and PC, the Commission on Social Determinants for Health includes the following statement:

> *The Alma Ata Declaration promotes PHC as an important endeavor towards equitable and good global health – not just health care at the primary care level, but rather a health system model that also targets health-related social, economic and political causes. (Commission on the Social Determinants of Health, 2008).*

According to the WHO definition, PC is one of the important components of PHC. Primary Health Care (PHC) is a holistic community approach with three main components: (a) PC and essential public health functions as the key to an integrated health care; (b) multi sectoral policies and actions; and (c) people and community's empowerment (WHO, 2022c).

[3] UKM comprises essential and developmental UKM. Essential UKM comprises health promotion services, environmental health, family health, nutrition, and disease prevention and control. Developmental UKM is innovative activities in alignment with the health priority issues in the work area.

Selective Primary Health Care (SPHC) vs. Comprehensive Primary Health Care (CPHC)

Like the PHC versus PC debate, the difference in this definition lies in the perspectives employed, namely between those who use a comprehensive approach to health and those who focus on the delivery of health services. The debate about SPHC versus CPHC is a theme that often arises in translating PHC operationally. The concept of Selective Primary Health Care (SPHC) focuses on implementing policies for diseases that have the highest prevalence and morbidity, the highest risk of death, and the greatest possible control in terms of the intervention's cost and effectiveness. This concept does not see health holistically and as a reflection of justice and social determinants. On the other hand, SPHC is of the view that health is limited to the vertical delivery of health services. It is very different from the Comprehensive Primary Health Care (CPHC) approach which emphasizes health improvement, which includes community participation, cross-sectoral collaboration, and appropriate technology (Rifkin & Walt, 1986).

The basic differences between SPHC and CPHC can be seen in the following table:

Table 1. Differences between SPHC and CPHC

Approach	SPHC	CPHC
Values	Effectiveness, efficiency, cost efficiency	Equality, community participation, intersectoral collaboration
Concepts	Health as absence of disease	Health as well-being
Orientation and Accountability	Vertical, health depends on vertical management and support	Depends on links between health and other sectors, community support and capacity building
Time period	Short term, dependent on donor and program	Long term, depending on population and public health

1.4. Global Context and Low-Middle-Income Countries (LMICs)

In the last few decades, the health condition in the low-middle-income-countries has changed. Health needs are rising, public expectations are increasing, and many new health development goals are no longer possible to fulfill by the measures in the current trajectory (Kruk, et al., 2010; Kruk, et al., 2018). What's more, countries in the world have committed to achieving the Sustainable Development Goals by 2030 and health is important in achieving them.

The transformative PHC system is once again the answer to the question of tools that can accelerate the SDGs' achievement. Research conducted by Kruk (2018) states that 8 million

deaths in LMICs stem from poor quality health systems. Health care providers are also often unable to provide services, with their quality being less than half of the recommended level. For example, only two out of five mothers who give birth in a health facility are examined within an hour of giving birth. As a result of this systemic failure, less than a quarter of the LMIC population thought they have a good health system, while in developed countries fifty percent of the population believe that they do.

Several systematic studies have shown the benefits of a well-functioning PHC in enhancing public health, improving health system efficiency, and addressing the inequality in access to health as shown in Table 2 (WHO, 2018b). This evidence shows that high investment and commitment to PHC will have a positive impact on various public health development outcomes.

Table 2. Evidence of the Positive Impact of PHC Implementation

PHC may improve the quality of public health		
Indicator	**Findings**	**References**
All-cause and cause-specific mortality (cancer, heart disease, and stroke)	There is strong evidence that a supply of primary care physicians (PCPs) will reduce all-cause and cause-specific deaths There is strong evidence that the sustainable care model contributes to a reduction in all-cause mortality	4 systematic reviews (Harrold, et al., 1999; Engström, et. al., 2001; Machinko, et al., 2007; Gray, et al., 2018) 1 non systematic reviews (Starfield, et al., 2005)
Maternal, child and neonatal deaths	There is strong evidence that primary care is associated with a significant reduction in maternal, child, and neonatal mortality in LMICs	7 systematic reviews (Perry, et al., 2017; Machinko, et al., 2009; Black, et al., 2017; Bhutta, et al., 2008; Christopher et al., 2011; Kruk, et al., 2009; Nkonki, et al., 2017)
Improved mental health (anxiety, depression, suicide)	there is strong evidence that primary care interventions can have a positive impact on the level of severity of depression, anxiety, and suicide	5 systematic reviews(Conejo-Cerón, et al., 2017; Fernandez, et al., 2015; Smith, et al., 2016; Smith, et al., 2018; Muntingh, et al., 2016) 1 tinjauan non sistematis (Dueweke, et al., 2018)

PHC may increase service efficiency		
Indicator	**Findings**	**Referensi**
Total hospitalizations (number of hospitalizations)	There is strong evidence that sustainable service modalities can reduce total hospitalizations Some evidence suggests that case management programs in primary care are associated with a reduction in total hospitalizations (reducing the state's burden of health care costs borne by the state).	4 systematic reviews (Huntley, et l., 2016; Cabana & Jee, 2004; Worrall & Knight, 2006; Sans-Corrales, et al., 2006)
Preventable Hospitalization	There is strong evidence that a better supply of and access to primary care physicians (dokter layanan primer-DLP) can reduce hospitalizations	3 systematic reviews (Wolters, et al., 2017; Rosano, et al., 2013; van Loenen, et al., 2014)
Hospital readmissions (number of patients who are readmitted after previously receiving treatment in a hospital within a certain period of time)	Some evidence suggests case and transitional cases management programs can reduce hospital readmissions	3 systematic reviews (Jones, et al., 2016; Joo & Liu, 2017; Verhaegh, et al. 2014)
Emergency case	There is strong evidence that decreased access to primary care is associated with an increase in emergency cases There is strong evidence that continuity of care is associated with a reduction in emergency cases	6 systematic reviews (Cabana & Jee, 2004; Worrall & Knight, 2006; Huntley, et al., 2017; Caret, et al., 2009; Kirkland, et al., 2018; O'Malley, 2004)
Health care costs	There is some evidence that the supply of DLP, specialized providers, continuity of care, and increased access to health services can lower total healthcare costs	5 tinjauan sistematis (Harrold, et al., 1999; Sans-Corrales, et al., 2006; Kirkland, et al., 2018; Stokes, et al. 2015; Jackson, et al., 2013)

PHC can improve inequality in access to health services		
Indicator	**Findings**	**References**
Equal access	Some evidence suggests that primary care can improve equality of access, especially for vulnerable adults Other international evidence suggests that access to primary care is more evenly distributed than access to specialist services, which usually favors the upper economic group	2 systematic reviews (Tao, et al., 2016; Batista, et al., 2018) 4 individual studies (van Doorslaer, et al., 2006; Richard, et al., 2016; Sweeney, & Mulou, 2012; Ferrer, 2007)
Equal health status	There is strong evidence from the US that primary care improves many health indicators	3 non-systematic reviews(Starfield, 2012; Amiri & Gerdtham, 2013; Shi, 2012)

Specifically in middle-income and low-income countries, well-functioning PHC has shown its contribution to increasing access to health services, including for the poor population, as well as to cost reduction, health outcomes improvement, coverage services, and quality of care, more responsive services to patients and communities, as well as equality and efficiency, child mortality reduction, and in some cases, reduced wealth-based mortality disparities (Kruk, 2010).

Although studies measuring the effectiveness of primary health care are still limited due to the challenges of limited resources and capacity, making it difficult to measure the impact through counterfactual/control, several systematic studies have shown the impact of primary care on health in several developing countries (Macinko, Starfield, & Erinosho, 2009; Rohde et al., 2008). The implementation of PHC must also face the challenge of the limited amount of funds used for health. In 2019, for example, the average per capita health expenditure in high-income countries was around IDR 42 million; and only around IDR 586 thousand for low-income countries (WHO, 2019). There is a significant difference between the two categories of countries, which is 70 folds.

The findings of the Kruk study (2010) show that the majority of low- and middle-income PHC programs for more than 30 years have evolved and developed to not only focus on health services, but also on intervention programs, including financing reform and community involvement. Furthermore, evidence suggests that a well-functioning PHC has a positive impact in low- and middle-income countries as follows:

Effectiveness

Many low- and middle-income countries have placed PHC as an important component of their health systems and have succeeded in expanding the scope of services from curative, to preventive, promotive and rehabilitative. Several countries (i.e. Cuba, Iran, Sri Lanka, and the Indian state of Kerala) demonstrated the importance of a strong commitment to providing access, where expansion of primary health care resulted in universal access to health services (Kruk, 2010). In Iran, first-rate health facilities increase coverage to 85% of the rural population within 20 years (Nasseri et al., 1991). Meanwhile, Brazil in the period 1994 to 2008 through PHC succeeded in expanding the coverage of services to more than half of its population, or about 86 million people (MoH of Brazil Department of Primary Care, 2007).

Health improvement

Improvements in health status, and in particular reductions in premature and preventable deaths, have been documented in major reforms in the PHC at the national level in Latin America and Asia. The health improvement is especially in child mortality and infectious diseases. In Brazil, infant and under-five mortality fell by 13% as primary health care coverage increased from 14% to 60% (Macinko, Guanais, de Fatima & de Souza, 2006). Thailand reduced the mortality rate for children under five years of age by 32%, half of which is thought to be due to the aggressive expansion of primary health care in rural areas (Vapattanawong et al., 2007). Several other countries have also reported the positive impact of primary health care programmes, generally on mortality in children under five years of age (Brockerhoff & Derose, 1996; Dugbatey, 1999; Hill, MacLeod, Joof, Gomez, & Walraven, 2000; Magnani et al. , 1996; Pence, Nyarko, Phillips, & Debpuur, 2007; Perry, Shanklin, & Schroeder, 2003; Perry et al., 1998; Velema,alihonou, Gandaho, & Hounye, 1991).

Responsive service

Studies that measure the responsive dimension of health care performance in developing countries are still limited. One study in Haiti showed that local level health services increase the convenience, comfort and confidence of the population in the health system, as in the case of community-based HIV services (Farmer et al., 2001; Walton et al., 2004). The family physician approach in Poland and Estonia is also associated with high levels of patient satisfaction (Kalda, Polluste, Maaroos, & Lember, 2004; Polluste, Kalda, & Lember, 2000, 2004, 2007).

Strengthening the health system

The PHC reform in Latin America represents an opportunity to expand and rationalize health. Delivery of services carried out to rural areas shows the expansion of the reach of primary health care. Strengthening overall PHC requires capacity building in planning, budgeting, and management at national and subnational levels, which may benefit the entire health care system (Frenk, Gonzalez-Pier, Gomez-Dantes, Lezana, & Knaul, 2006; Gakidou et al. ., 2006).

Equality

Inequality of access to quality basic health services has an impact on poor health status among certain social and economic groups. In Kerala, India, limited facilities and trained health personnel in rural areas encourage the poor to switch from publicly funded primary care to private health care at much higher costs (Nair, 2004). In the example of Costa Rica and Brazil choosing economically disadvantaged areas, the implementation of the PHC initiatives succeeded in reducing the gap in access to services between rich and poor (Rosero-Bixby, 2004). Similarly, Iran, Latin America, and Sri Lanka are focusing on rural areas to reduce inequalities in access to health services. Thailand has also explicitly focused its primary care efforts in rural areas, for example, through increasing the supply of general practitioners to rural areas, providing rural health insurance, and expanding rural clinics. This approach has been shown to reduce relative mortality among the poorest children more rapidly than among the richest children and the inequality of mortality rates based on poor-rich income has decreased by more than half between 1990 and 2000 (Vapattanawong et al., 2007).

Financial protection

Financing is an important component to ensure the availability of affordable and quality primary health care. Fair and adequate financing is essential to protect individuals and communities from cost barriers to accessing essential service needs. In many cases, cost barriers for treatment in rural areas increase out-of-pocket costs for low-income groups who are forced to use private/paid providers or travel further afield for quality health care (Varatharajan, Thankappan, & Jayapalan, 2004; Withanachchi & Uchida, 2006).

Efficiency

Studies that measure the cost efficiency of services tend to come from middle-income countries rather than low-income. Studies in Brazil show the cost range for the Family Health Program is estimated to be only around IDR 420 thousand per capita in the areas covered. The use of non-physician health workers is also associated with lower training requirements and costs than the use of doctors in Africa (Dovlo, 2004). The WHO Macroeconomic and Health Commission calculated that it would cost IDR 500 thousand - 570 thousand per capita to provide various essential health care needs (WHO, 2001). Even with these numbers, there are still many people in lower-middle income countries who cannot access basic health services.

1.5. Indonesian Context

1.5.1. Dynamics of the Impact of PHC Implementation in Indonesia

In the Indonesian context, the positive impacts of PHC services' implementation remain to be diverse depending on their form and location.

1.5.2. Dynamics of PHC Policy in the Indonesian Context

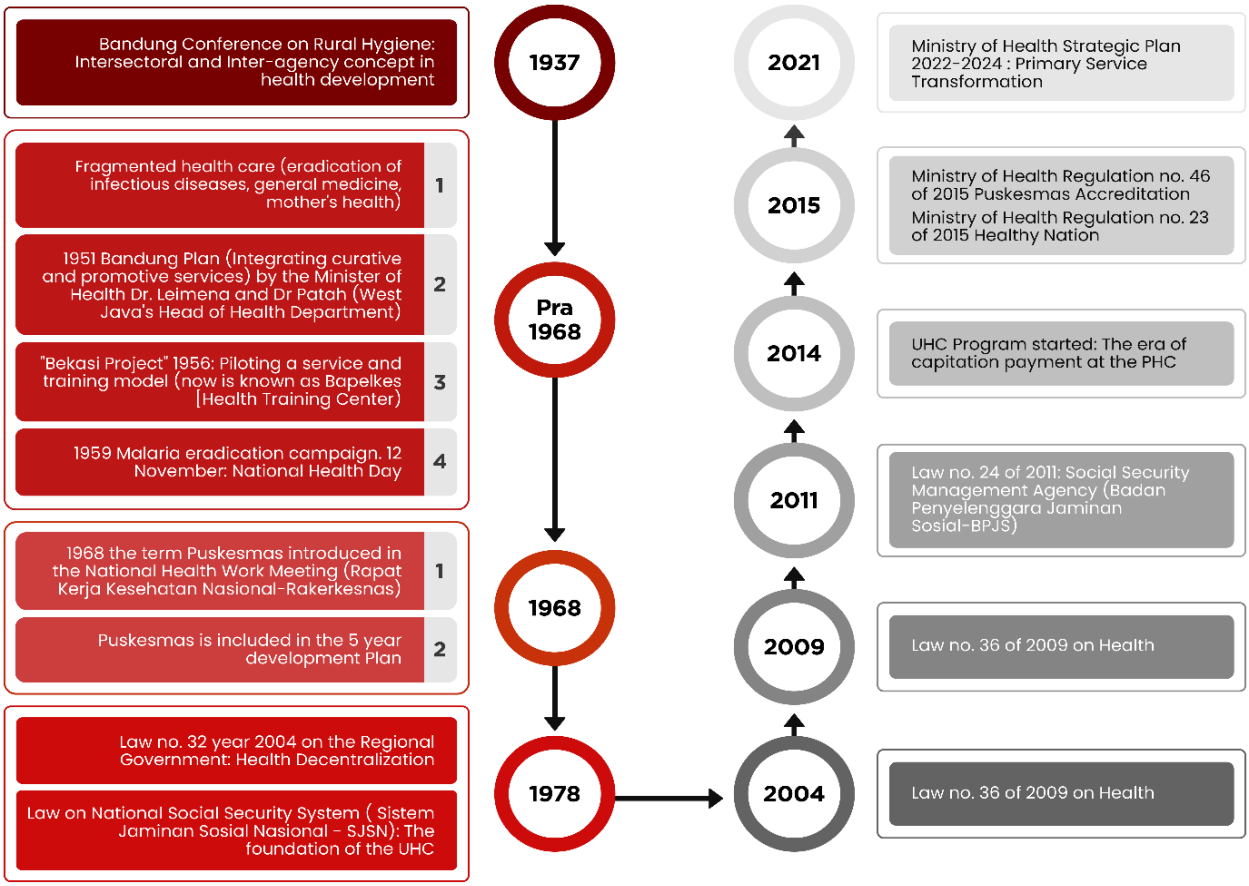


Chart 3. PHC Policy Journey in Indonesia

In the Indonesian context, the National Health System had not significantly evolved until the issuance of the National Social Security Law which was then followed by Law No. 24 of 2011 on the Social Security Management Agency (BPJS). It is unfortunate that this law was enacted without being followed by the appropriate amendments to the Health Law. As a result, the operation of the BPJS Law has been carried out without the necessary revisions to the national regulations on the national health system and in particular without improving primary health care. In fact, in 2014 the Regional Government Law was enacted which regulates the roles, duties and responsibilities of the central and local governments, governing decentralization. The absence of a National Health System Law means that there is also no Regional Health System Law. This regulatory gap also affects the condition of Indonesia's PHC which has not succeeded in transforming, even during safe situations and with an incremental increase in the state budget allocation for the health sector. Based on the 2019 National Health Account, Indonesia's health spending is still very low at 3.8% of GDP. As a result, with the allocation of the budget to other health interests, the budget allocation for PHC is very small (0.05% of GDP).

In public discourse, discussions on primary health care issues are often limited to occurrences on the operational side. Meanwhile, more substantive and policy matters are only subjects of certain discourse among policy makers. The lack of public knowledge about the existing health policies is one of the reasons the issues in health services, especially in primary health, are not well defined among various groups. The JKN issue is different, both in news and social media. This national health insurance is an issue very close to and often discussed by the general public. Its usefulness is clearly defined and practical even in the social setting. This makes it easier for policy makers and researchers to access feedback or identify problems expressed in the society.

It can be said that the absence of public discussion about primary health care at the policy level means that there has never been an effort to generate public demand. Whereas Puskesmas as the spearhead of primary health care, if they are transformed with good governance, can function as the providers of primary service and other essential public health functions and will be optimally used by the public. However, presently it seems that the Puskesmas is seen as a lower-middle class affair where the policies of the central and local governments are more inclined to support hospitals.

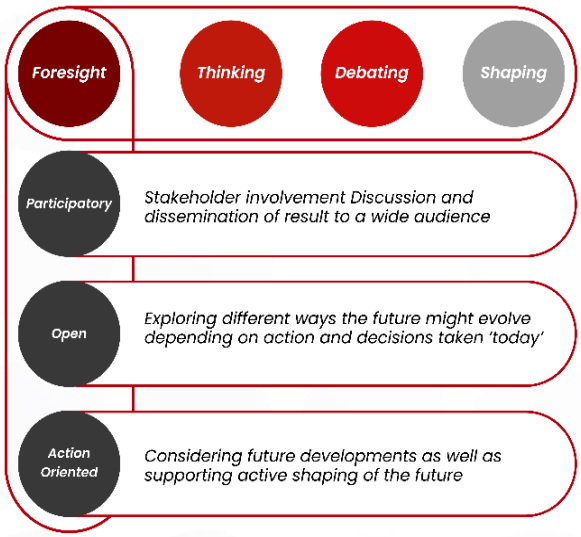
This hospital-centric policy has grown stronger with the circulation of the agenda to add more international hospitals domestically with the intent to absorb the public's expenditure to access health services abroad, the total of which can reach tens of trillions of IDR.

Chapter 2
Foresight Methodology for Primary Health Care Transformative Policy

"Oh that we might have the wisdom to stop,
lean down and pick up the scattering of things
that we've so thoughtlessly discarded along the way.
For if we were to do so, we would suddenly find ourselves
holding the very treasures that we'd been looking for all along."
Craig D. Lounsbrough

2.1 What is Foresight?

Foresight is used by the Organization for Economic Cooperation and Development (OECD) as a tool for long-term planning. Foresight can assist the government in policy making, so that the resulting policy can anticipate possible changes. In addition, foresight also encourages policy innovation that opens up the options or possibilities to experiment through and with innovative approaches (OECD, 2019).



It is very important to distinguish between Foresight and Forecast (prediction or prognosis of the future). Foresight is more of a process than a technique. Foresight is not intended to predict with certainty what will happen in the future. Foresight guides the process of thinking, debating and shaping the future in a participatory, open and action-oriented way, by defining and fulfilling a shared long-term vision and desired future conditions. In contrast to forecasts, foresight is not aimed at 'getting the future right', but to broaden and reframe reasonable developments that need to be considered.

Chart 4. Foresight

Foresight brings together key change agents and various knowledge sources to develop strategic vision and anticipation. By emphasizing stakeholder networking and participation throughout the vision development and future-oriented policy-making process, *Foresight* can

be carried out effectively to inform policy-making, build networks, and enhance the ability to address long-term problems.

Foresight can have different functions that support policy making, such as (Da Costa et al., 2008):

- **Informing policy**: generating insight into the dynamics of change, future challenges and options;
- **Facilitating policy implementation**: increasing capacity for change in specific policy areas by building shared awareness of current and future challenges such as building networks and new visions among stakeholders;
- **Empower participation** in policy-making and thereby increase transparency and legitimacy;
- **Support policy definition**: jointly translate the results of the collective process into specific options for policy definition and implementation;
- **Reconfiguring** policy systems to address long-term challenges;
- **Has a symbolic function**: shows the public that policies are based on rational information.

2.2. Foresight Methodology

Foresight relies on a set of forward-looking approaches that aim to help decision makers explore and anticipate in a participatory manner what might happen, and prepare for future possibilities, influencing and shaping them. Foresight is usually carried out by systematic, participatory discussions, and the process of developing a medium to long-term vision to open up alternative possibilities that occur in the future. Foresight uses different methods and tools to consider different possible future developments and their integration into current decision-making, by thinking, debating and shaping the future (JRC, 2011).

This report uses the five sequential phases of Miles (2002) to guide the foresight process. They consist of pre-foresight (scoping), recruitment (or participation), generation, action and renewal. Chart 5 below depicts the five foresight phases and the activities involved in each. These phases will be briefly described in the following paragraphs.

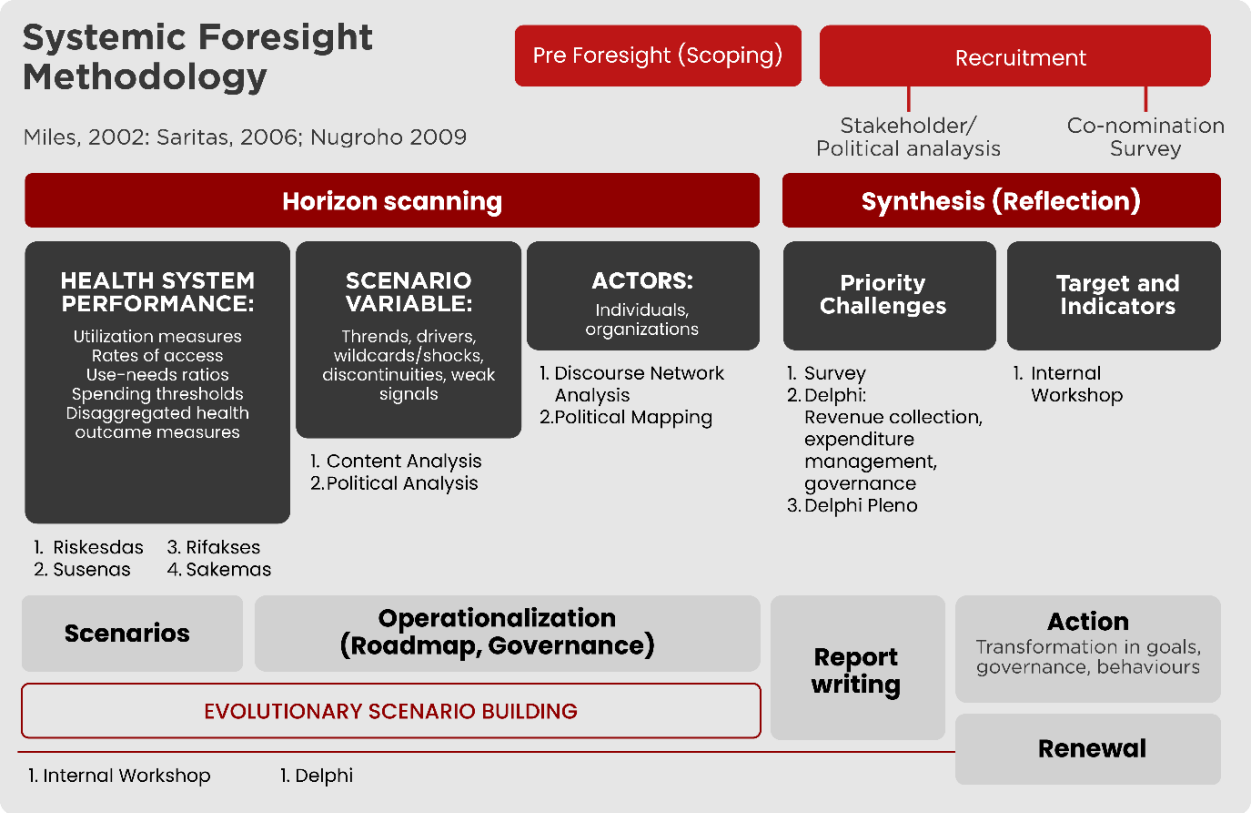


Chart 5. Research methodology used

Theoretically there are five stages of the Foresight (Miles, 2002), namely (i) pre-Foresight, (ii) recruitment, (iii) implementation of Foresight (generation), (iv) take action based on foresighting (action), and (v) evaluate and update the cycle (renewal). This process is a standard process and has been practiced in many contexts, both developing and developed countries (Georghiou et al., 2008). In addition to carrying out the stages according to the methodology, the foresight applied in this study is designed to put more depth on the input of expert resource persons either through Delphi or in the process of exploring the linkages of issues in the thematic discussions of Social, Technology, Economics, Environment, Politics, and Values.

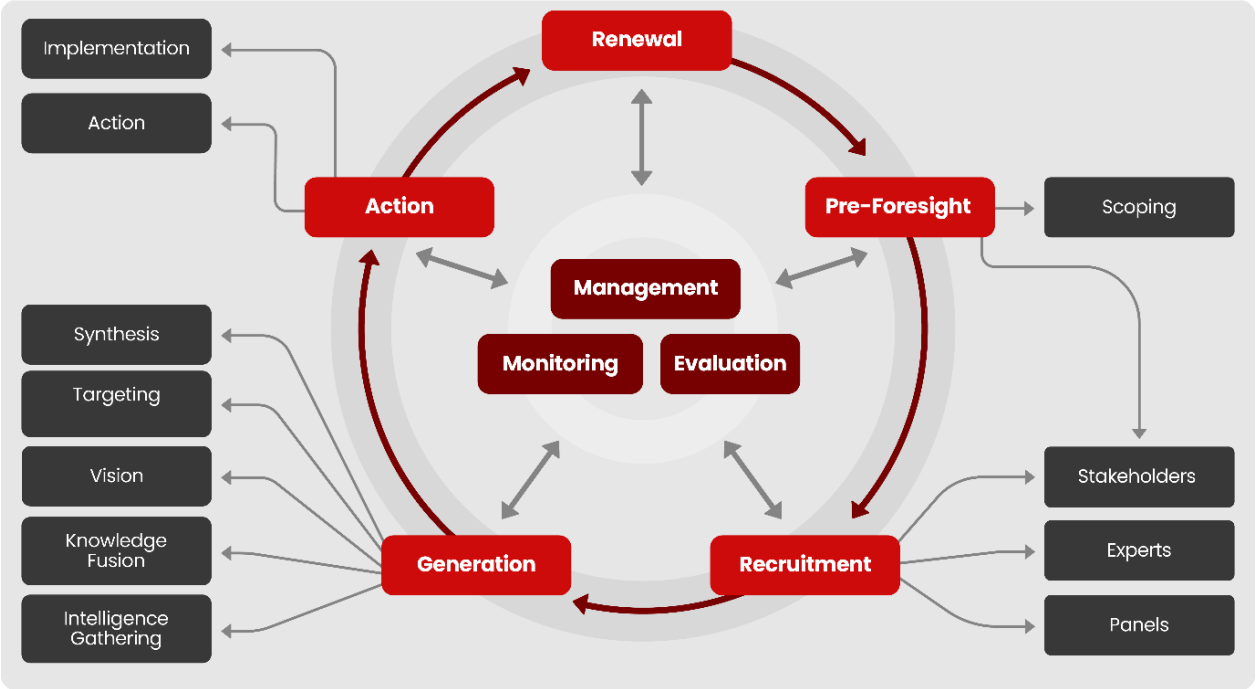


Chart 6. Foresight (Miles, 2002)

Pre-foresight (scoping)

The process begins with the pre-foresight phase, which involves a series of scoping that include making decisions about the reasons and objectives of the foresight, the research team that will be involved, and the methodology to be used.

Recruitment (participation)

This study brings together change agents (decision makers, business, and civil society) and knowledge sources (formal and informal) to develop a strategic vision and anticipate the future. We employ stakeholder analysis to identify policy makers. We brainstormed and conducted a co-nomination survey to recruit experts who understand the relationship between primary health care issues and expertise in their respective fields.

Generation

In this phase the information that is already available is collected (horizon scanning) and new knowledge is synthesized to form a future vision and action plan.

Horizon scanning is a technique to look for early warning signs of changes in policies and strategies. A combination of literature searches, Twitter conversations and online news media feeds, as well as Delphi techniques are used to gather scientific knowledge and opinions from various stakeholders on strategic issues that need to be addressed in the area of primary health care policy and to highlight related agreements or conflicts. Specifically, stakeholders were asked to identify scenario variables: trends, drivers, surprises (wild cards), weak signals, and

discontinuities, which may appear, disappear or change and so influence and shape the future (expected timing of events is 2024).

During this process, it is important to look beyond the current policy environment when identifying the drivers of change. Many of the driving factors will shape the development of primary health care that will emerge from outside the policy area, namely shifts in the social, technological, economic, environmental, as well as political and value factors (STEEPV)

Because of this, a panel of STEEPV experts was also asked to identify strategic issues related to them. We asked the panel to rank each issue in order of importance to determine the sustainability of primary health care and how urgently it requires policy intervention.

Action

The overall objective of foresight is to provide valuable input into strategy and policy planning, while also mobilizing collective strategic action. This step involves exploring alternative ways of the external environment that might develop in the future, considering how each actor might behave differently, and identifying the key terms of policy under different conditions. Scenario planning helps policymakers anticipate how the future might be different, starting today, and how to develop policies that are resilient across a range of possible futures.

The process of vision development is then used to clarify expectations, establish common goals and objectives for primary health care, highlight what is important in the short term and what can be "delayed", and identify the scale of change needed to successfully achieve them. When experts explain their vision, we encourage them to be aspirational and not shackled by today's realities. The intent behind this design is to help remove practical barriers, policies or structural confines that might be blocking them from thinking. The potential danger of pushing this way of thinking is that discussion groups push the conversation into unrealistic or impractical territories. When that happens, we would remind him to return to the present-day reality and allow other experts to correct. We argue that there is more benefit in building an ambitious – even unrealistic – vision and then adapting it than being overly cautious and unaspiring for future success.

Evaluation and Renewal

Evaluation is a method of systematically collecting information about the achievements of activities, which can be used for other purposes such as socialization and renewal of activities. This information is useful for those who participate in foresight. Evaluation provides a good opportunity for the participants involved to express their views on what worked and what did not. After the evaluation, renewal of foresight is an important step that aims to create a foresight, where it can continue to be used as a policy and strategy-making tool (Saritas, 2009).

2.3. Why do foresight for Primary Health Care?

The pandemic response, out of necessity, is dominated by the tendency to be "firefighters". Public health emergency management generally focuses on implementing organizational standards and programs and systems for acute incident management. However, a pandemic like COVID-19 is not an acute event. Beyond direct shocks to health and health systems, pandemics will inevitably have long-term consequences on the country's social, technological, economic, environmental and political landscape, as well as indirect impacts on health systems. This landscape will affect the vulnerability of countries, and certain populations within countries, to the short-term and long-term effects of a pandemic. Different countries will use different strategies, lead to different, and yet unpredictable, futures.

For Indonesia, a pandemic can result in the collapse of the health system or, conversely, can be a catalyst for its reform. Considering the need to prepare for the worst-case scenario and proactively build towards the preferred one, the Indonesian Academy of Sciences is working with the Center for Indonesia's Strategic Development Initiatives to apply a multi-disciplinary approach to envisioning possible futures and informing strategic responses to structural changes caused by the pandemic.

In particular, primary healthcare reform was chosen because high-performing primary healthcare is the most strategic for managing the impending pressures on health systems in a post-COVID-19 world. On the other hand, public discourse on primary health care is still limited so that the issue of its strengthening is not well understood by various groups. The existing discourse so far is often limited to the operational side. Meanwhile, discussions related to substance and policies only occur among a small number of stakeholders. In fact, if the Puskesmas as the spearhead of primary health care is transformed in its governance and the public awareness of its important role is increased, its position as a provider of primary care and other essential public health functions will be optimally fulfilled.

Through a study entitled Foresight: Structuring the Future of Indonesia's Primary Health Care Services, AIPI and CISDI conducted horizon scanning, amassed inputs from dozens of expert resource persons in the health and non-health fields, and synthesized various actual conditions of primary health care in Indonesia in a strategic, inclusive, and holistic manner using the foresight method. We examined the social, technological, economic, environmental, political, and value dimensions that surround primary health care. From this in-depth study, we identified various challenges that must be overcome to strengthen the position of primary health care in the Indonesian health system.

There are several big questions that we are trying to answer, such as: what needs to be addressed from efforts to strengthen the strengthening of primary health care in Indonesia; what policies are needed; what commitments each level of government must have; who are the actors who need to be involved in the effort; and how efforts to strengthen primary health care can have an optimal impact on the health system in Indonesia.

The three things above, as a unit, will be the main points of future challenges that must be faced and handled by the Government through policies and practices/execution of Primary Health Care. If implemented carefully and adequately, this will be one of the most strategic contributions or inputs from AIPI and CISDI, both to the current Government and to future Governments.

Chapter 3
Horizon Scanning

"No one knows the future,
but the present offers clues and hints
in its direction."
— Innocent Mwatsikesimbe, Mirror

The most crucial first stage in foresight is scanning the horizon of social dynamics (horizon scanning). This stage aims to map the widest possible events and trends which significantly influence the implementation of primary health care policies in Indonesia. This identification is the key to understanding the challenges in providing primary health care that have been or are being faced by the Indonesian government. This identification is also a way to detect early signs of developments that could potentially pose a threat or present an opportunity to reform primary health care in Indonesia.

The information for horizon scanning can come from a number of 'traditional' sources (scientific publications, quantitative data or opinion columns), as well as more 'current' sources such as news and social media. This study deliberately scans the horizon with news sources and social media for three reasons. First, the rapid development of online and social media in Indonesia in the 2009-2021 monitoring period makes them authentic and written sources for horizon scanning. Second, they can also serve as tools for understanding how stakeholders and the community are involved in discussions around primary health care issues. Third, despite the fact that the users of the media are still dominated by urban communities, the substance of the news and media conversations can be relied on to capture the public demands and complement the opinions of experts gathered through the Delphi technique.

3.1. Online Media

Online media in recent years has become an extension of conventional print and audio-visual media in Indonesia. Online media are "institutions/groups of parties" that produce news published through the internet on a regular basis. Currently, almost all media (whether newspapers, radio, or TV) in Indonesia have their online versions. The analysis was conducted on 740 online media with a total electronic archive of 46,766 articles containing the keywords 'puskesmas', 'clinics' and 'FKTP' in the period of 2009-2021. To compare the breadth of the conversation horizons, this study also scanned the keywords 'hospital' and 'BPJS Kesehatan'.

Figure 1. below shows that the conversation and news trend increase along with the growth of online media outlets in Indonesia. The online media provide a share of news about hospitals which is three times more than primary health care. This indicates a stark difference in the news value of the two issues. The trend of news about hospitals rose faster than news about primary health care during the COVID-19 pandemic period in Indonesia, rising and falling with the wave of SARS-CoV-2 infections.

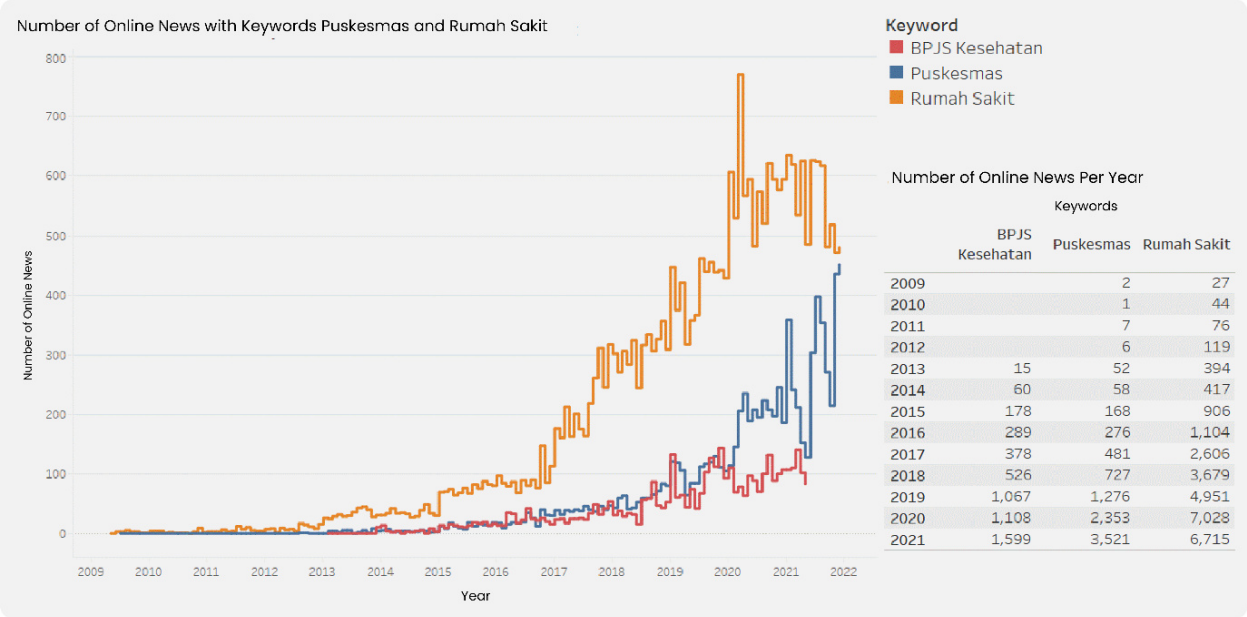


Figure 1. Number of online media coverage with keywords *Puskesmas* (primary health care), *Rumah Sakit* (hospitals) and *BPJS Kesehatan* (National Social Security Agency for Health)

This study takes a closer look by comparing scan results in the political years (2009 and 2014) and during the COVID-19 pandemic (2020 and 2021). By focusing the study on these years, this study not only compares the development of news topics in the early-late period of the study, but also looks into a period in which the discussion on the topic of health is assumed to increase due to political debates and the pandemic. This was done with the hope that the study would identify and map richer trends.

In 2009 the coverage of 'puskesmas', 'clinics', 'FKTP' and 'hospitals' was very limited, then increased significantly in 2014. This may be influenced by the focus of mass media coverage in 2009 on the impact of the peak of the global economic crisis in the fourth quarter of 2008 domestically. The primary driver of the increase in mass media coverage in 2014 was the implementation of the National Health Insurance (*Jaminan Kesehatan Nasional*-JKN).

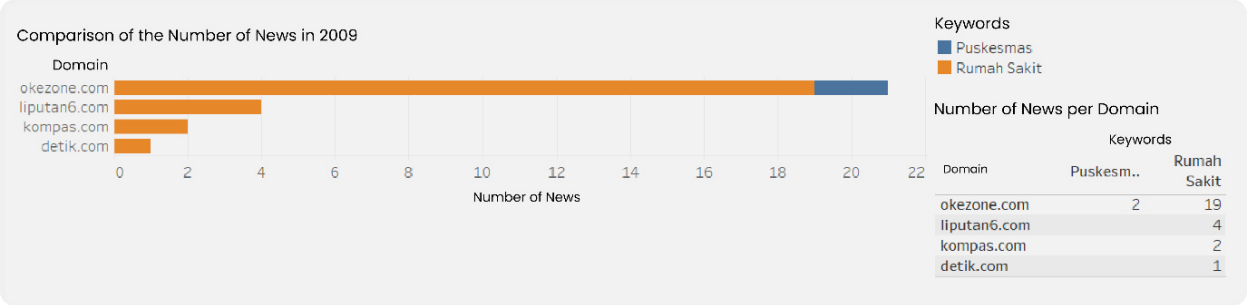


Figure 2. Comparison of the number of online news in 2009

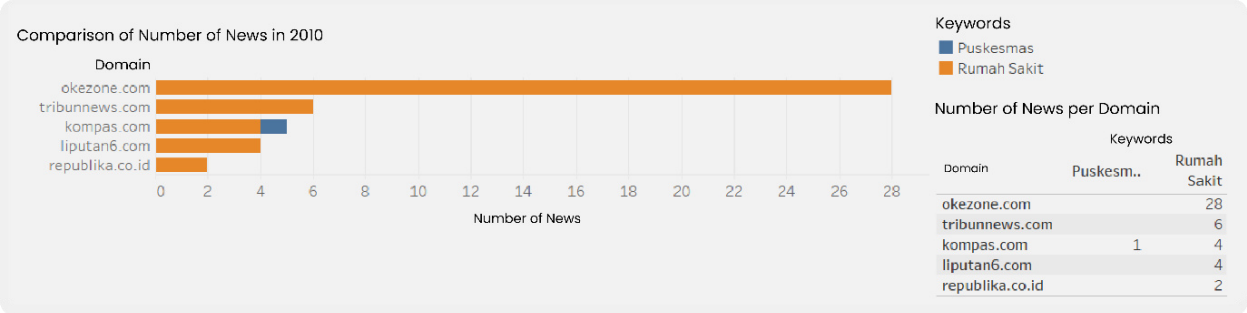


Figure 3. Comparison of the number of online news in 2010

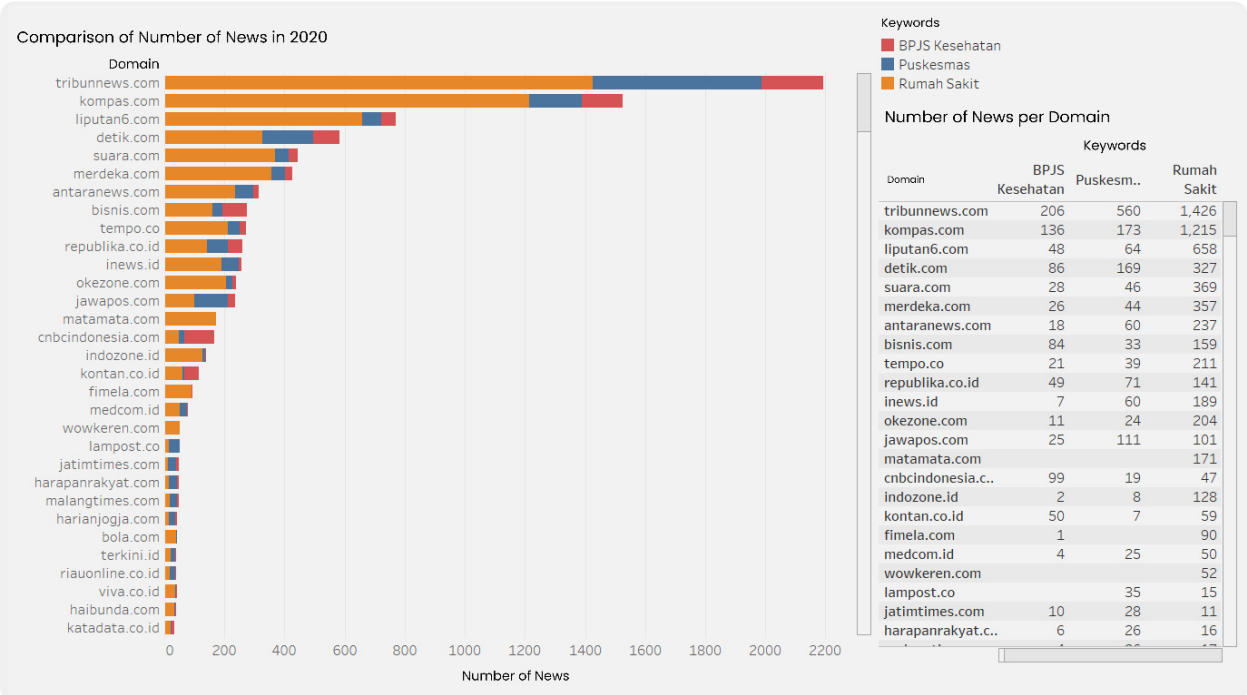


Figure 4. Comparison of the number of online news in 2020

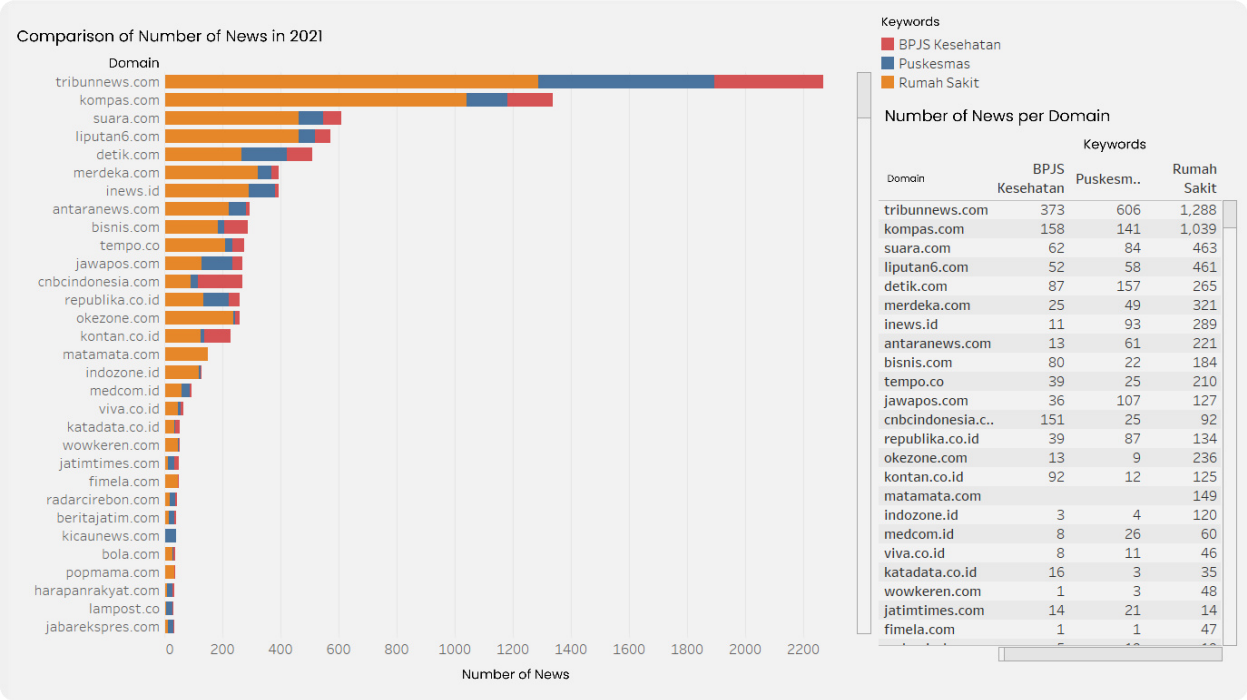


Figure 5. Comparison of the number of online news in 2021

This electronic media archive analysis can quickly map the national priorities that become the main concern and are the target of scrutiny through the frequency of publication. The online media analysis process was carried out through keyword grouping (word cloud) from the article titles to determine the main topics associated with primary health care per year from a total of 740 online media. The comparison of yearly word clouds shows that news coverage shifts from everyday anecdotal incidents to key policy topics: free services, opening hours, availability of medicines and health workforce, JKN-KIS, accreditation, capitation funds, and COVID-19 examinations and vaccinations. . In addition, there appears to be an increase in the number of actors tweeting using keywords related to primary health care. However, the increase in the number of actors and tweets in the period 2009-2021 are still not sufficient to carry out an in-depth horizon scan so as to clearly reveal the discursive PHC network and its sentiment analysis.

Figure 6. Word cloud online media 2009 (n=2)

Figure 7. Word cloud online media 2010 (n=1)

Figure 8. Word cloud online media 2011 (n=6)

Figure 9. Word cloud media online 2012 (n= 5)

Figure 10. Word cloud media online 2013 (n=52)

Figure 11. Word cloud media online 2014 (n=56)

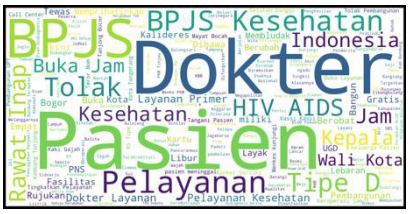


Figure 12. Word cloud media online 2015 (n=148)

Figure 13. Word cloud media online 2016 (n=241)

Figure 14. Word cloud media online 2017 (n=469)

Figure 15. Word cloud media online 2018 (n=728)

Figure 16. Word cloud media online 2019 (n=1.276)

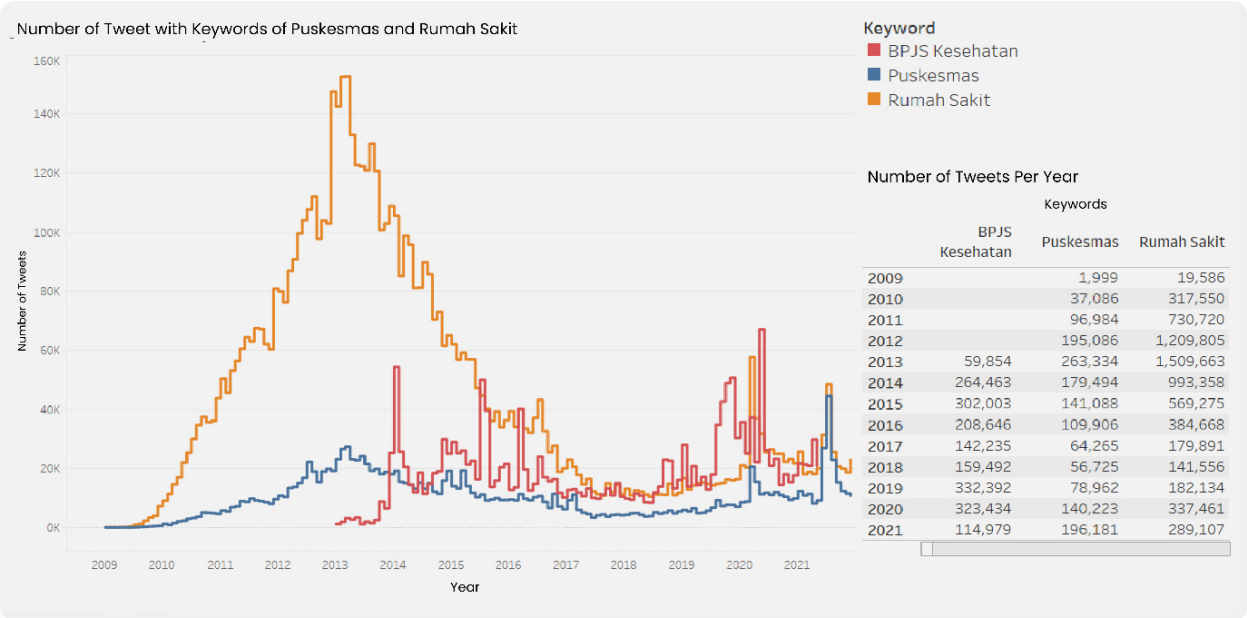
Figure 17. Word cloud media online 2020 (n=2.351)

Figure 18. Word cloud online media 2021 (n=2.424)

3.2. Twitter

In addition to online media, what is meant by social media in this report is a communication medium that relies on user accounts. Since 2007 various social media outlets have sprung up and multiplied in number: Friendster, Facebook, LinkedIn, Twitter, Instagram, Path, Google+, and so on. Indeed, even now almost all media (whether newspapers, radio, or TV) have accounts on one or all of these social media.

The social media monitored and analyzed is Twitter, especially records of domestic (Indonesian) conversations about primary health care. The analysis was carried out on 1,571,817 conversation units in this electronic space in the period January 1, 2009 to December 31, 2021, with an annual frequency as shown in Figure 19. To compare the breadth of conversation horizons, this study also scanned 6,864,774 conversations about 'hospitals' and 1,907,498 conversations about 'BPJS Kesehatan'.



Number of Tweets Per Year

	Keywords		
	BPJS Kesehatan	Puskesmas	Rumah Sakit
2009		1,999	19,586
2010		37,086	317,550
2011		96,984	730,720
2012		195,086	1,209,805
2013	59,854	263,334	1,509,663
2014	264,463	179,494	993,358
2015	302,003	141,088	569,275
2016	208,646	109,906	384,668
2017	142,235	64,265	179,891
2018	159,492	56,725	141,556
2019	332,392	78,962	182,134
2020	323,434	140,223	337,461
2021	114,979	196,181	289,107

Figure 19. The frequency of tweets each year regarding Primary Health Care compared to hospitals and BPJS Kesehatan

Similar to the online media analysis, the determined categorization is based on the occurrence frequency of the keywords Puskesmas, FKTP, and klinik (clinic) in the conversations. These keywords are associated with significant events per year. The analysis of significant events defined in the period 2019-2021 was then compiled as a trend list.

Table 3. Main events/drivers discussed on twitter according to the 100 most popular tweets (original tweets in Bahasa Indonesia)

Year	Twitter Account	Tweet	Events/Trends[4]
2009	tvOneNews	Malang Municipality Government Free Medical Treatment at Puskesmas http://bit.ly/8F9V8z	Free service/funding
	noriyu_md	@pasarsapi yah..betapasouls and bodies of our health care workers who are OVERLOADed with jobs + overlapping programs without any implementing staff..	The workload of health workers
	kompascom	HEALTH NEWS: Calang Health Center Overwhelmed with Patients http://bit.ly/6P5ppZ	Service capacity
	mratuliu	This morning watching TV1, Bandung residents many people have been poisoned by anti-elephantiasis medicine which is given free of charge by the health center.. In junior high school there are 9 people who died..	Quality of service
2010	Metro_TV	Every year 5000 new doctors pass. But there are 900 health centers without doctors. Why this happened? Read COLUMN Kartono Mohamad http://t.co/ikisRuq	Supply-side readiness
	kompascom	1600 Indonesian Health Centers Without Doctors http://bit.ly/cNMxrS	Supply-side readiness
	Metro_TV	Cost of Medical Treatment at the Health Center for the Poor Only Rp1,400: http://bit.ly/bFgHEB via @addthis	Free service/financing
	tvOneNews	Private Hospitals & Health Centers Can Be Empowered to Serve Poor Patients http://de.tk/XxsfL	Free services/financing
	tvOneNews	Childbirth costs in Class III & Free Public Health Centers in 2011 http://bit.ly/dRmenF	Free services/financing
	OneNews	Alert, Gorontalo Health Centers Use Defective Vaccines http://bit.ly/cTfeQc	Quality of service in
2011	teletubbles	PUSKESMAS: Dizziness, sprains, colds -oh damn	Quality of service
	detikcom	Pharmacists in abundance but very few working at the Puskesmas http://de.tk/5l4JV via @detikhealth	Supply-side readiness
	detikcom	Puskesmas Must Be Able to Handle Mentally Ill Patients http://de.tk/VDKIA via @detikhealth	Service capacity
	blogdokter	The specialist physician assignment is not for primary services at the puskesmas, but at the hospital. #bulukumba	Referral

[4] Grouped based on The Primary Health Care Theory of Change (WHO & UNICEF, 2020)

Year	Twitter Account	Tweet	Events/Trends[4]
	Metro_TV	Health Budget Rises, Hundreds of Health Centers Still Concerned http://t.co/Jlrpg2x	Supply-side readiness
	detikcom	Puskesmas PONED, so that no more mothers and infant mortality at http://t.co/iuJ59UpH via @detikhealth	Service capacity
	detikcom	All Puskesmas Get Operational Assistance of IDR 75-250 Million http://de.tk/HStxS	Financing
	republikaonline	These are 100 Types of Diseases that Puskesmas Does Not Address http://t.co/zYwJCq1z	Service capacity
2012	basuki_btp	Healthy Jakarta card has been launched, if any Puskesmas/referral hospital refuses, please report it to the GOV/VICEGOV and the municipality government health department.	Free services/funding
	detikcom	Indonesian-style Puskesmas Followed by Many Other Countries http://t.co/1zDr3nFI via @detikhealth	service quality
	shahnazhaque	Currently, health services that already have ISO consist of 44 sub-regency Puskesmas, 5 hospitals, and 144 sub-regency Puskesmas..very cool..	service quality
	detikcom	Jokowi-Ahok Wants All Jakarta Residents' Health to be Covered at Puskesmas http://t.co/vzKBzSMM	Free service/funding
	kompascom	All Puskesmas in Jakarta Start Free Service http://t.co/2Z8pbe5p	Free service/financing for
	Metro_TV	Jakarta Health Card Applies, Puskesmas Overwhelmed http://t.co/bA4tACI8	Service capacity
	VIVAcoid	Ahok: Rich People Wouldn't Want to Go to Puskesmas http://t.co/7iHqy8Z5 @basuki_btp	service quality
	KoasRacun	The DPR building project has spent billions. The stock of drugs at the Puskesmas is limited. What the F is wrong with the government?!	Supply-side readiness
2013	SBYudhoyono	With BPJS Kesehatan, the poor can seek treatment & treated for free at the Health Center & hospital. BPJS to fulfill the right to a healthy life for all.	Free services/financing
	detikcom	Even if tomorrow all doctors throughout Indonesia agree not to practice, Puskesmas will continue to run http://t.co/dJb3pgNyIW via @detikhealth	Service capacity
	Metro_TV	2014 service, Salary of Doctors and Nurses at Jakarta Puskesmas is IDR 7 million/month http://t .co/LTAJF8XOgH	Incentives for health workers
	SamitraAdhikari	31. Overwhelmed, hospitals accuse Puskesmas as the party that provided arbitrary referrals for patients. #DKI	service capacity

Year	Twitter Account	Tweet	Events/Trends[4]
	detikcom	Portrait of the current Indonesian Puskesmas, Some Still Don't Have a Stethoscope http://t.co/9dGLLL5F3O	Supply-side readiness
	detikcom	Ahok: All Puskesmas in DKI Later Will Meet RSCM (Cipto Mangunkusumo Hospital) Standards http://t.co/ KAUsrcLHVE	service capacity
	detikcom	Ridwan Kamil Aspires to Build a 24-Hour Health Center http://t.co/HwAqiaezXZ	service capacity
	detikcom	Jokowi Will Auction Head of Puskesmas http://t.co/PY0NB0Gne2	Quality of health workers
	falla_adinda	Salary of honorary doctors at Puskesmas and Hospitals in Jakarta, it is confirmed that Ahok will give more than 7.5 million. Praise the Lord! God bless him.	Incentives for health workers
	detikcom	Ahok: A professor said, 70% of those admitted to the RSCM can be handled at the Puskesmas http://t.co/URVzXiKC	service capacity
	Metro_TV	Specialists will be placed in 341 Puskesmas http://t.co/BdUyn17jzz	Supply-side readiness
2014	detikcom	_	_
	firrywahid	_ 9000 existing Puskesmas.. Prabowo promises to build a modern hospital in every regency/city.	Supply-side readiness
	blogdokter	BPJS Kes requires that some diseases must be treated at the Puskesmas/PPK I and should not be referred to the Hospital/PPK II. #BD ang_chun	Service capacity;
	ang_chun	2. Jokowi Promises to Build 50 Thousand Puskesmass http://t.co/RPa6yHp9oP	Supply-side readiness
	GWirjawan	Indonesia needs more health centers to improve health services. -blb http://t.co/PaVoYWpp37	Supply-side readiness
2015	fadlizon	During Campaign @jokowi_do2 promises to build 50,000 puskesmas. This means 1 Day 27 health centers. Til now, it's almost 3 months, there is no signs of it yet.	Supply-side readiness
	sbotv	VIDEO : : The number of Puskesmas does not guarantee public health http://t.co/f0rcVbpiO5 #SBOUpdate via @SBOUpdate @sbotv	Service capacity
	detikcom	243 Health Centers in Indonesia are heavily damaged http://t.co/1WdSKS2bBp via @ detikHealth http://t.co/pCTDbIiOwc	Supply-side readiness

Year	Twitter Account	Tweet	Events/Trends[4]
	detikcom	Flooded with Patients, RSCM is Said to be Like a Giant Puskesmas http://t.co/K27NaIUoNc	Service capacity
	Nusantara_Sehat	Kompas 18 March 2015 : Strengthening Puskesmas at the border "Health workers are equipped with non-medical skills " #nusantarasehat http://t.co/u7kq7EbDfY	Distribution and quality of health workers
	KemenkesRI	10 Health Centers that Passed Ministry of Health Accreditation. https://t.co/uZkfYC8wHD	Accreditation
2016	psi_id	There are 44 puskesmas at the sub-regency level in Jakarta that have facilities equivalent to hospitals. Cool sir @basuki_btp ! Let's support #JakartaSehat https://t.co/gOHSldZ5VC	Service capacity
	ridwankamil	Bandung residents, all Puskesmas vaccines in Bandung are guaranteed authentic because the SOP is to always take from the Ministry of Health sources.	service quality
	AhokDjarot	"Now whoever you are as long as you have a Jakarta ID card if you are sick you go straight to the puskesmas, we take care of everything" #BadjaBeramal	Free service/
	pandji	Anies-Sandi targets 80% exclusive breastfeeding mothers. The method? From recruiting breastfeeding counselors at Puskesmas to mandatory lactation rooms in malls & office https://t.co/pIIESlQPub	service capacity
	dirgarambe	#vaccine case is heading to clarity. @KemenkesRI ensures that the vaccines at the Public Health Centers / Government Hospitals are genuine. The distribution chain is maintained	service quality
	KemenkesRI	Puskesmas is not only a place of service but is also used as education & early detection for the community #IndonesiaLawanDiabetes	Service capacity
2017	basuki_btp	Happy International Health Day. #JakartaPunyaSemua, free ambulances, Puskesmas upgrades, and private doctors for residents without exception. https://t.co/UZLAg7ZEqb	service capacity
	halus24	Bareskrim Polri: 18 Puskesmas in Jakarta Inaugurated by Djarot Indicated to Involve Corruption https://t.co/o0VrSPZfPU	governance
	addiems	Puskesmas in Jakarta is different. Cool. https://t.co/UAiWJZ3i3N	Service Quality
	RakyatCyber	It is true what Marwan Jafar said, what progress has Ganjar made? The roads are still damaged, yesterday the latest was a woman who walked 1.5 Km to bring her child to the puskesmas for treatment but was refused. Then the child died, Ganjar was shameless and even mentioned the regent via Twitter	Access to services

Year	Twitter Account	Tweet	Events/Trends[4]
	Sutopo_PN	The impact of the 6.9 SR earthquake left 4 people dead, 11 seriously injured, 25 lightly injured, 451 houses heavily damaged, 579 houses moderately damaged, and 1,905 houses were slightly damaged. Damage to 46 schools/madrasah units, 38 units of places of worship, 9 offices, and 4 hospitals and Puskesmas.	Supply-side readiness
	ridwankamil	With online consultation apps between Puskesmas doctors and thousands of specialists, the burden of & queues at the hospitals can be reduced to the maximum. https://t.co/1mREOEZ3wD	service capacity
	BPJSKesehatanRI	#SebaikAndaTahu Changes to FKTP health facilities can only be made within 3 months after the participants are registered in the previous FKTP :) https://t.co/5kl6xDdXNL	governance
	detikcom	Refused Treatment at the Puskesmas, 7 Months Baby in Brebes Dies https://t.co/AYkM2FALVs https://t.co/61xmETcA7P	Access to servi cces
	setkabgoid	This year, @KemenkesRI will place 1,120 health workers in 188 Puskesmas to increase the achievement of indicators for the Healthy Indonesia Program	Supply-side readiness
	ganjarpranowo	Health centers need to be accredited immediately! cc @dinkesjateng @dinkesbrebeskab @KemenkesRI --- Baby Dies due to Rejection for Treatment at Puskesmas, Governor Ganjar Angry https://t.co/AkpItVIsHm	Access to services
	AzwarAnas_A3	Kudos for Puskesmas friends & @Dinkesbwi who tirelessly visit the homes of sick poor residents. Work while Worshiping. https://t.co/r2Tx2c1X1X	Access to services
	KemenkesRI	The Ministry of Health Targeting to Build 124 New Puskesmas at the Border Areas @KemenkesRI via @republikaonline https://t.co/ECw2toVeV9	Supply-side readiness
2018	sandiuno	We, Prabowo-Sandi shall continue the BPJS program, and we are sure that we can manage this better. In the future we will ascertain that there shall be no more indebted hospitals and Puskesmas.	Governance
	JackVardan	This is the result of me tracing Jokowi's 2014 campaign pledge to build 50.000 puskesmas. From the data I get, there are only 94 puskesmas 2014 ri 2017. This is the complete attachment in the form of an article I wrote, please read: https://t.co/U0oorLOKkE https://t.co/ZgTtFeDYEm	Supply-side readiness
	historia_id	Some question the role of Yohanes. Know Johannes Leimena, involved in the movement since the Youth Pledge, participated in various negotiations, appointed 8 times to be the Minister of Health and the pioneer of the health	Service capacity

Year	Twitter Account	Tweet	Events/Trends[4]
		service system that involves the community, which later became Puskesmas https://t.co/Dctq3Gusvp	
	rmol_id	Alleged Corruption in the Building of 30 Puskesmas in Jakarta during Ahok era Reported to KPK #Korupsi https://t.co/dJVIC6Xsby	governance
2019	didut	Please disseminate, some people may need this. LIST OF CLINICAL PSYCHOLOGISTS IN JAKARTA PUSKESMAS. You can pay with BPJS or pay 30 thousand IDR per consultation. [source via a post in Facebook] https://t.co/hPSdzkiAUC	Service capacity
	aniesbaswedan	Thank be to God, be thankful. Deeply grateful that three Emergency Ambulance personnel from Pademangan Sub regency arrested by the Metro Jaya Police can go home. https://t.co/rZWtWLko4o https://t.co/SGR46fl20X	Events
	naishakid	If you think you need a psychologist but afraid that it'd be too expensive, don't let it prevent you from seeking help The psychologiust consulting fee in Puskesmas is only IDR 7.000. It can be free if you have BPJS. Hope you'll feel better soon! *hugs* https://t.co/bw0nSQa90U	Service capacity
	idtodayco	Puskesmas Does not Give the Ambulance Permit, A Father Carried the Son's Corpse Home https://t.co/e67rpqUZhC	Events
	evalez_fr	Mr. @ganjarpranowo what to do, a resident of Wanasari Sun regency, Brebes wants to get treated was asked for KIS, but a baby does not have KIS. Walked on foot 1,5 Km, Mother Rejected by Puskesmas Until The Child Died https://t.co/LOsdbiJ32m	Access to services
	ridwankamil	MPUS (MOBILE PUSKESMAS) will start operating next Monday in Cililin KBB. The car which can transform and self expand will go around the remotest villages in West Java, providing complete health services with doctors, health personnel, & medical equipment including digital telemedicine https://t.co/20Bm2kJbni	Access to services
	aniesbaswedan	Head of Cilandak Puskesmas, dr. Luigi and team creates e-Jiwa app to detect mental disturbances and integrate mental health care. E-Jiwa App is now being developed by @dinkesJKT to be used by puskesmas all over Jakarta. https://t.co/9F41lQaYVB https://t.co/9RWAllMfy2	Service capacity
2020	ridwankamil	PILOTING COVID-19 VACCINE ADMINISTRATION through my left arm was done yesterday at Puskesmas Garuda Bandung. My body now officially contains weakened or terminated Covid-19 virus. (Please read the entire thread - 1/5) https://t.co/mi8EjcKItL	Events

Year	Twitter Account	Tweet	Events/Trends[4]
	Adiitoo	Basically it's like this, if you feel symptoms like ; 1. Fever 2. Sore throat 3. Flu 4. You just returned from abroad or just had close contact with people who just returned from abroad, go to the Puskesmas.	Events
	ferdiriva	For you who'd like to donate PPE to medical personnel, please don't forget those in PUSKESMAS. Sick patients firstly will go there before getting a referral.	Events
	dr_koko28	Today there are additional 2000-ish COVID patients. Some Puskesmas have to close down. SOme doctors passed away. Some health personnel fell ill. I hope we can prevent additional cases. So that our health facilities and personnel are not "overwhelmed". Don't let them collapse.	Events
	podoradong	Because Jokowi asked for a decrease in corona distribution curve within two weeks, there is now an instruction for all puskesmas in surabaya to cease mass test and decrease PCR test with the excuse of reagent shortage	Events
	taufiknugraha	Twitter please do your magic! I am a pharmacist in one of the Puskesmas in Bandung city, I need many N95 masks to do swab and serve outpatients. We are lacking of PPE, especially N95 masks. Perhaps somebody would like to help by giving some ����	Events
	trendingtopiq	All Puskesmas in Makassar Avail Free Swab. https://t.co/9lSny7M05u	Service capacity
	imadya	Today finally I got some masks, 1500 masks and 300 gloves, I distribute them to the Puskesmas in the Subregencies of Kebon Jeruk, Tamansari and Palmerah. I distribute them to subregency puskesmas because they are the spearhead nearest to the sick residents. https://t.co/IKUHx3pofc	Events
2021	anonblobfish	So happy to see the women cadres expressing their pride as the integrated service post cadres. Without them there will not be village level health services and puskesmas will be overwhelmed. Most ppl just dont know how hard their work is and how unappreciated they are. https://t.co/IPhOHe96YU	Events
	YoGojekYo	Friends, for you who are symptomatic but cannot swab because you don't have the funds, please private message me. We will set up equipment & volunteers for free swab. If positive, you must report to the puskesmas & PCR + independent isolation!!! If negative we will help you with vitamins, can continue bidding�� https://t.co/f3Y5Zs80hc	Events
	WidasSatyo	Vaccines in Puskesmas ran out but there is a party that can hold vaccination events, this adequate shows your nation's crisis management.	Service capacity

Year	Twitter Account	Tweet	Events/Trends[4]
	irasjafii	Dear God, for what. First, it's an open space. Second, it's sterilized by natural UVC alias the sun. Better buy.Puskesmas oxygen concentrators, pulse oximetry and telemedicine system to monitor patients who are independently isolating https://t.co/TKCmCImToF	Events
	berhijabmerah	People and their circle who have money, if Covid19 positive still can cope. They got notification, go to antigen/PCR test using their own funds. The lay people must report to Puskesmas, if they want to do PCR they are asked to independently isolate while trying to approximate symptom severity. The process is not quick. So don't be careless. Worse still careless and tactless.	Events
	zwolftenaugust	guys pcr is expensive because the machine is expensive, the extraction machine is expensive, the reagent is expensive. bsc (work table) has to be min. level 2, the lab zero pressure. Therefore if you want it to be free then go to puskesmas/health r & d because all of the high expenses are covered by the Ministry of Health. The capital to establish a lab is high. https://t.co/a5zliwZvFA	Events
	blogdokter	Suggestion to the government Puskesmas should focus on tracing and testing. Hospitals fokus on treatment. For vaccination, please recruit volunteers or other agencies outside the two. It is very tiring to have to do multiple tasks at the same time. I hope I am heard.	Events
	ribonk	Puskesmas and FKTP collapse, the staff are collapsing. There is an agenda to close essential services to focus on 3T and vaccination. Congratulations, covidiots, you make many elderlies and people with comorbidities have difficulty in getting treatment and routine control	Events
	democrazymedia	Disheatening! Jokowi Prepared IDR 178 Trillion to build the New Capital, but 171 Sub regencies in Indonesia Do Not Have Puskesmas Yet https://t.co/m3A1d6RuHP	Supply-side readiness
	mrs_enci	Friends, West Java Province and CISDI are opening job vacancies for 500 health personnel related to Puskesmas strengthening. https://t.co/Kr9379W7PW	Health human resources' distribution and quality
	ObiWan_Catnobi	Last week, on 9 July, the storage for vaccines in Puskesmas Sumur Batu & the pharmaceutical garage of the Health Department of East Jakarta was also burned down. Also due to short circuit. ±1000 vaccine bottles destroyed in Sumur Batu Puskesmas. Whereas the pharmaceutical garage, "only" archives	Events
	muchlis_ar	In West Sumatra, a number of Regional Governments are reported to only keep the vaccines sent to them. In Aceh, the vaccine officials are attacked in the filed. The location is attacked. LaporCovid is still noisily criticizing the involvement of TNI Polri, because everything should have been tackled by Puskesmas. Just for the sake of making noise.	Events

A comparison: Overview of Discourse Network Analysis (DNA) and Sentiment Analysis in JKN

In this sub-chapter, the research team provides an overview on the depth of the scanning that can be explored from the public conversation horizon (social media and Twitter). A similar study has been completed by the research team, which scans the public conversation horizon for the topic of the National Health Insurance (JKN). As stated at the beginning of this chapter, during 2003-2021, nearly 2 million tweets about JKN were observed on the Twitter platform.

For example, DNA mapped for the topic of the increase in JKN contributions can become a network where the linkages between actors are clearly seen, as shown in the image below**.**

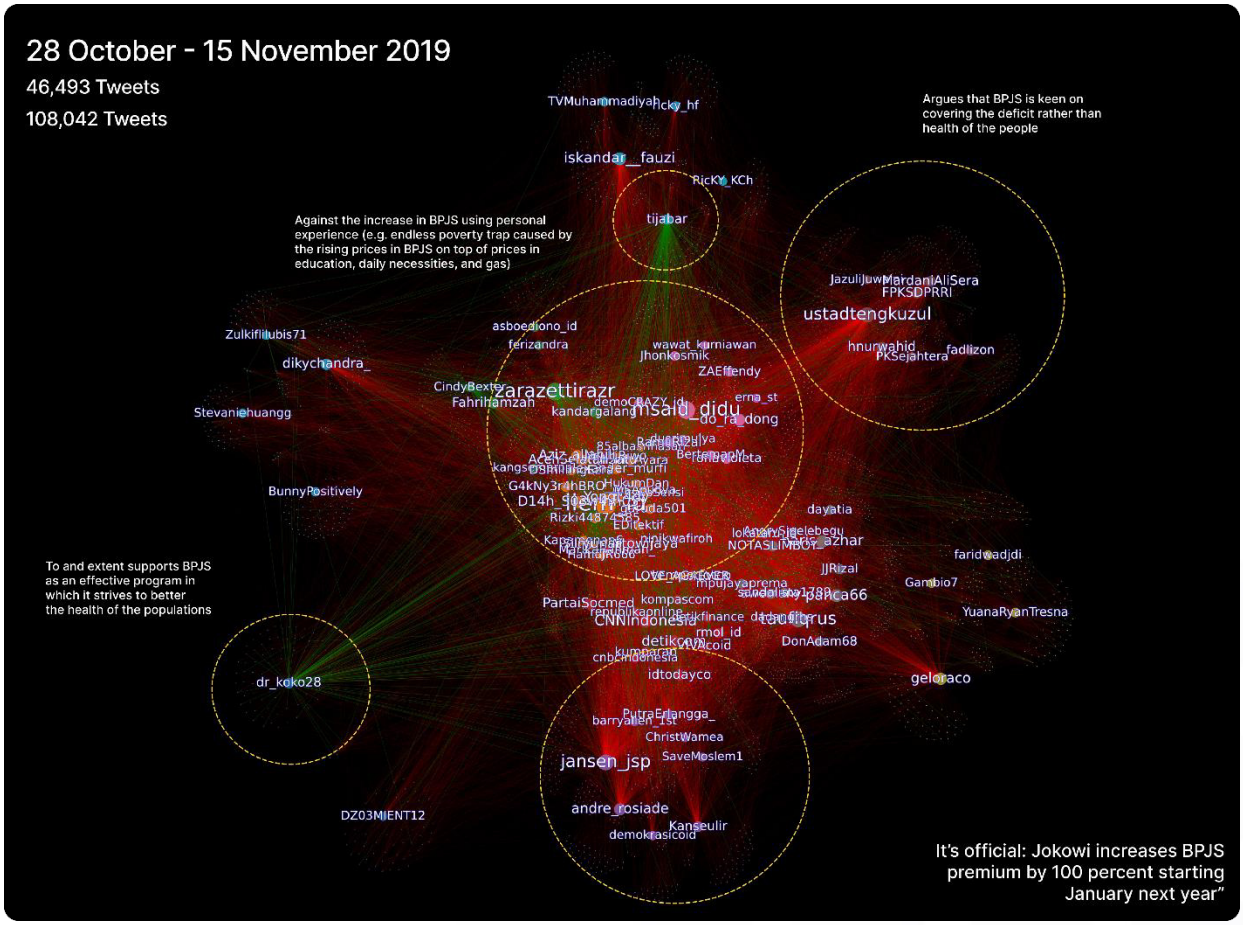


Figure 20. DNA map of BPJS contribution increase

From the DNA map above, it can be assumed that the public has an interest in discussing JKN and explicitly voices protests to the government about the government's inability to handle the BPJS deficit. In fact, at its peak on May 12, 2020, it shows 7 out of 9 groups had negative sentiments. This exhibits a significant increase from the previous peak on October 16, 2018, where only 3 out of 7 groups had negative sentiments towards JKN.

In addition to DNA, horizon scanning with a sufficient amount of public conversation data can produce sentiment analysis. For the JKN topic, the study conducted by the research team in 2021 scanned a sentiment analysis map as shown below:

Figure 21. Map of JKN Sentiment Analysis

Such an in-depth analysis is possible because the issue of JKN is widely discussed by the public. Meanwhile, the analysis of the PHC horizon scan had to be carried out in the form of word cloud clusters because there were only a few public conversations about it. Public conversations that are caught are one-way in nature as operational announcements and do not touch the PHC's nor the health system's policy aspects. This loss of perspective and the absence of public aspirations have resulted in PHC policies stagnation for years.

Chapter 4
Structural Challenges of Primary Health Care in Indonesia

"Staring at danger may not be pleasant -
but closing your eyes will not make the danger go away,
and with closed eyes you will surely be destroyed by it."
Isaac Asimov, Catastrophes!

Bearing in mind the limited PHC discourse horizon in the public space that can be scanned in the horizon scanning phase, the author team decided to use The Primary Health Care Theory of Change (WHO & UNICEF, 2020) as a compass in mapping structural challenges. Various inputs from expert resource persons in Delphi (FGD and Plenary), as well as from expert resource persons especially invited to STEEPV discussions were incorporated into the issue mapping. which is then integrated into The Primary Health Care Theory of Change. Various issues mapped were rechecked for context and technicality based on the references available in scientific publications.

The Primary Health Care Theory of Change (WHO & UNICEF, 2020) outlines the 14 key levers that each country needs to translate the Astana Declaration into an operational policy framework. The policies or interventions of each lever cannot be carried out independently because they are closely interrelated.

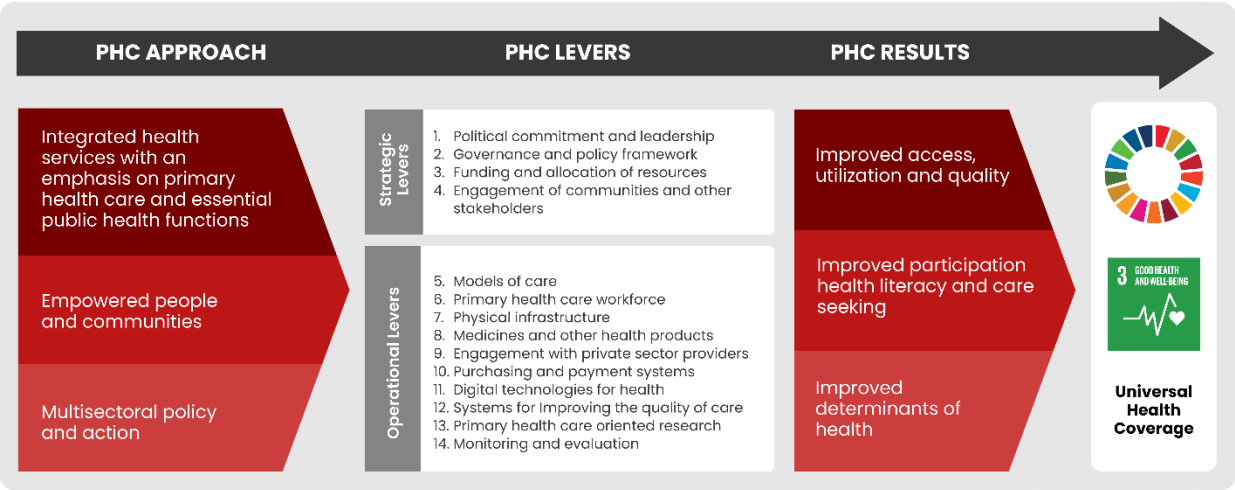


Chart 7. The Primary Health Care Theory of Change (WHO & UNICEF, 2020)

Based on the classification of The Theory of Change, we used the Delphi methodology to guide the process of confirming and validating horizon scanning to the experts (see list of Delphi resource persons in Appendix 4.). In two Delphi series with the theme of policy direction and economic and investment case, we asked: (1) What are the problems of Primary Health Care in Indonesia and how are these problems are interrelated; (2) What can be done from a policy perspective to resolve the issues, both in terms of the regulatory framework and operational implementation; (3) What investments are needed to solve the problem?

The plenary consultations that followed were used to ensure that all the trends identified and mapped were discussed in greater depth and refined and summarized to make them easier to understand as data to help analyze the dynamics surrounding primary health care.

Of all the mapped trends, descriptive analyzes were developed for 14 domains of strategic and operational levers that require government attention and response. These fourteen domains are the structural challenges of future primary health care delivery. The analysis of these domains will also be used elsewhere in this report to strengthen strategic prioritization of primary health care reform to respond to these challenges.

4.1. Strategic Levers

4.1.1. Political commitment and leadership

At the national level, the Medium-Term Development Plan (*Rencapa Pembangunan Jangka Menengah*-PJMN) as a political and leadership commitment places primary health care reform as a prerequisite for achieving universal health coverage and the SDGs. As the main technical ministry, the Ministry of Health establishes three performance quality indicators: (1) Percentage of accredited first-level health facilities; (2) Percentage of Puskesmas with health workforce types according to the standard; (3) Percentage of Puskesmas with available essential drugs.

However, primary health care reform requires the commitment and leadership of non-health Ministries/Institutions, at least: the National Planning Agency (Bappenas), Ministry of Finance, Ministry of Villages, National Population and Family Planning Agency (BKKBN) and BPJS Health. Bappenas plans to improve health services in relation to plans to increase the quality and competitive human resources. In line with the Ministry of Finance. The Ministry of Villages places health services in an effort to create independent villages and developing villages. However, the three of them do not explicitly define the related performance indicators. In contrast to Bappenas and the Ministry of Villages, the BKKBN includes strengthening the capacity of health facilities and networks that serve Family Planning and Reproductive Health (KBKR) in its policy strategy with two performance indicators based on Puskesmas.

The strategies above show that the Ministry/Agency planning documents above do not fully accommodate the three components of primary health care, namely: (a) primary and essential public health services as the core of an integrated health services; (b) multi sectoral policies and actions; and (c) empowered people and communities (WHO & UNICEF, 2020).

4.1.2. Governance and policy frameworks

According to Law no. 23 of 2014, the Central Government established policies as the basis for carrying out Mandatory Government affairs related to Basic Health Services. To support the operationalization framework, the central government publishes primary health care policy and governance instruments through at least 2 laws, 2 Presidential Regulations and 16 Minister of Health Regulations and Decrees (see Appendix 1). However, the parameters of the ability to administer government as mandated by the law are only related to the accessibility of basic health services.

By placing health as a concurrent government affair,[5] the central government intends to grant significant autonomy to local governments. Consequently, the central government is faced with the challenge of achieving national goals when the delivery of key public services is the local governments' authority. Thus, the success of decentralized governance depends on a proper conceptualization of the scope and mechanisms of the central government's influence over the local governments, including ultimately the ability to ensure performance compliance vis-a-vis service delivery.

One way to gain such control is through the introduction of mandatory local government functions and the associated Minimum Service Standards (MSS). Government Regulation no. 2 of 2018 calls for the provincial governments to set standards for mandatory functions based on the central government's guidelines. As the leading sector the Ministry of Health issued the Minister of Health Regulation no. 43 of 2016 on MSS in the Health Sector to amend the previous standards set in the Minister of Health Regulation no. 741 of 2008. The district level target indicators in the current MSS are categorized into standard service packages for 12 population groups and no longer in the form of a single intervention indicator. The technical standards for meeting the quality of basic services at the minimum service standards in the health sector are subsequently stipulated through the Minister of Health Regulation no. 4 of 2019.

As a consequence of decentralization, Puskesmas becomes a Regional Technical Implementation Unit (*Unit Pelaksana Teknis Daerah*-UPTD) of the Regency/City Health Department, so that in carrying out its duties and functions, it will refer to the health development policy of the relevant Regency/Municipal Government, which is listed in the Regional Medium-Term Development Plan (RPJMD) and the District/City Health Service Five-Year Plans. Therefore, the Ministry of Home Affairs establishes Minimum Service Standards to ensure local governments provide appropriate public services in terms of quantity and quality. Unfortunately, Government Regulation No. 39 of 2006 on Procedures for the Control and Evaluation of the Implementation of Development Plans has not accommodated the mechanism for monitoring and evaluating the achievement of MSS.

[5] Concurrent Government Affairs are the Government Affairs distributed between the Central and Provincial and Regency/Municipality Regional Governments

In order to assist the Ministry of Home Affairs in implementing the carrot and stick approach, the Ministry of Finance has established a performance-based Regional Fund Transfer since 2020. The balancing fund (check 2022 allocation), as the largest component of the Regional Transfer Fund, is determined according to a certain proportion/calculation in accordance with a certain formula and the amount is fixed. Each region is entitled to a balancing fund without having to compete for it.

Unfortunately, the amount of the Regional Incentive Fund (*Dana Insentif Daerah*-DID), which reflects the actual performance incentives, is only 1.87% of the total transfers to the regions. The small amount of incentives will certainly lead to the idea that depositing funds to the bank and amassing the interest will be more profitable than achieving performance standards and "only" getting incentives that are more or less the same with the bank's interest rate. Preferably the incentives given for performance achievements should be increased to the ideal level, which is in the range of 20-40% of the total transfers to the regions. The passage of the Bill on Financial Relations between the Central and Regional Governments (*Hubungan Keuangan antara Pemerintah Pusat dan Daerah*-HKPD) into law is the right momentum to improve the transfer policy to the regions.

In addition to the use of disincentive-incentive instruments, governance related to accountability especially in the public sector (considering the limited contribution of the private sector that utilizes public funds for primary services) needs to be reviewed. Current mechanisms, such as the Government Institution Performance Accountability Report (*Laporan Akuntabilitas Kinerja Instansi Pemerintahan*- LAKIP), function more as administrative compliance mechanisms rather than accountability ones. The clarity of the institution that has the capacity to assess performance reports and the transparency of the consequences of fulfilling or not achieving the performance of a public service institution in the health sector needs to be reviewed. This is an important element in maximizing the use of the government's tools to encourage the performance of ministries and local governments, both financial instruments (central budgeting mechanisms, balancing funds) and MSS (Minimum Service Standards).

4.1.3. Funding, allocation of resources, and strategic purchasing

Governments that seek to provide health services for all have three options: (1) increase government revenues for health; (2) cut costs by limiting service coverage (for example, removing certain services from the standard benefit package, increasing cost-sharing or reducing supply-side financing; or (3) improve the efficiency of the use of funds. Global experience shows that a combination of the three is almost always necessary.

In terms of budget availability, the share of the health budget has reached and is stable at 5 percent, the amount legally mandated for the health sector from central government spending. Based on the National Health Account, the total public health spending has nominally increased from year to year, but has remained relatively stagnant in proportion to the GDP. Public spending on health—to the amount of 0.016% percent of the GDP or 0.52% percent of total

health expenditure —is significantly lower than the average state expenditure with the same income level.

Public spending on health has increased sharply in recent years and public out-of-pocket (OOP) cash expenditures have gradually decreased due to the implementation of JKN. However, the outlook for Indonesia's health budget for 2021, which reaches Rp 326.4 trillion (an increase of 89.5%) only reflects an increase in short-term priorities. On the other hand, the health budget in 2022 is down 21.8% compared to the outlook for Indonesia's health budget in 2021.

Most of the 2022 health budget is still allocated for handling the Covid-19 pandemic, even though the government itself has declared a transition to endemic. Invisible displacement in the health sector from non-COVID-19 essential services to handling pandemics can worsen overall health indicator achievements. Reducing the devastating impact of the pandemic on public health financing is critical. Health spending needs to be increased to maintain the growing trend of per capita health spending on health and to keep pace with the target OOP reduction rate.

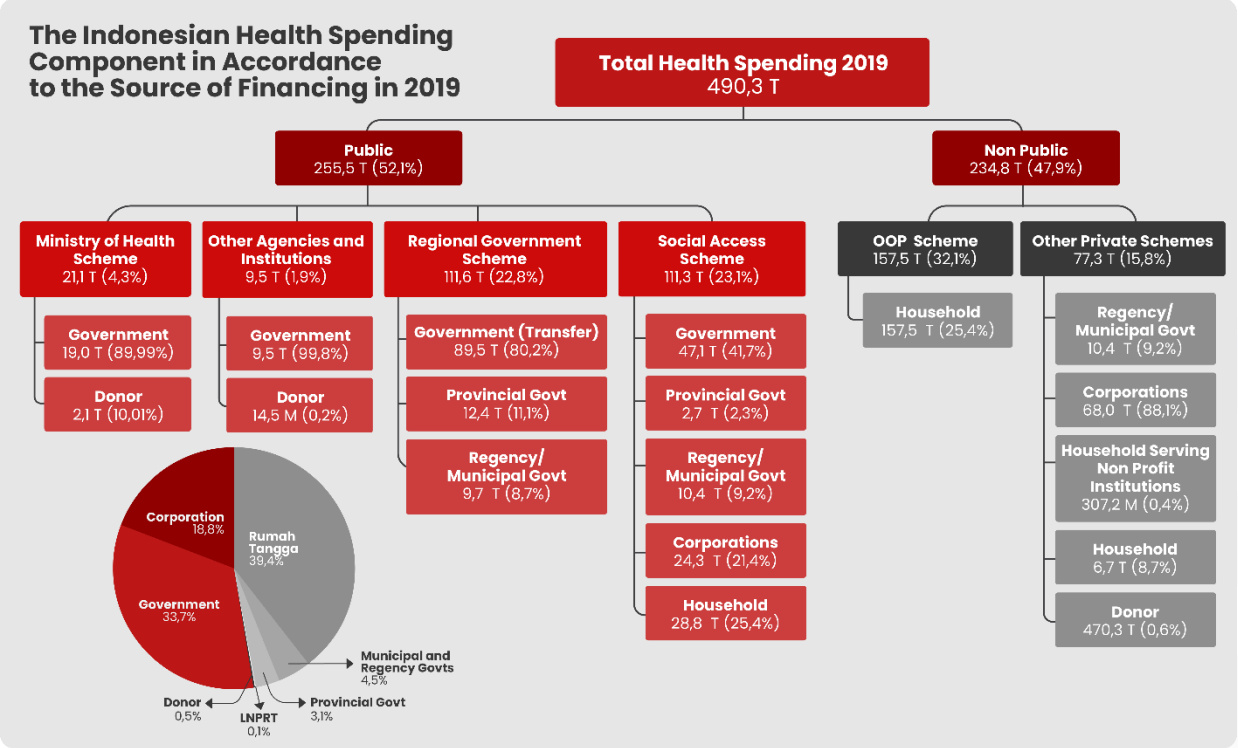


Chart 8. Components of Indonesia's Health Spending by Source of Financing in 2019

The public health budget scheme in the Ministry of Health does not show the prioritization of the transformation of primary health care (CISDI, 2022). Ideally, the budget provided for strengthening primary health care covering aspects of the health system is $65 per capita per

year or about $5 per month in order to produce the outcome of increasing life expectancy by 3.3 years in 2030 (Steinberg et al., 2019). Whereas in the 2019 National Health Account Indonesia the budget for hospitals reached 55.7%, greater than the budget for FKTP which was 23.7% of total health spending.

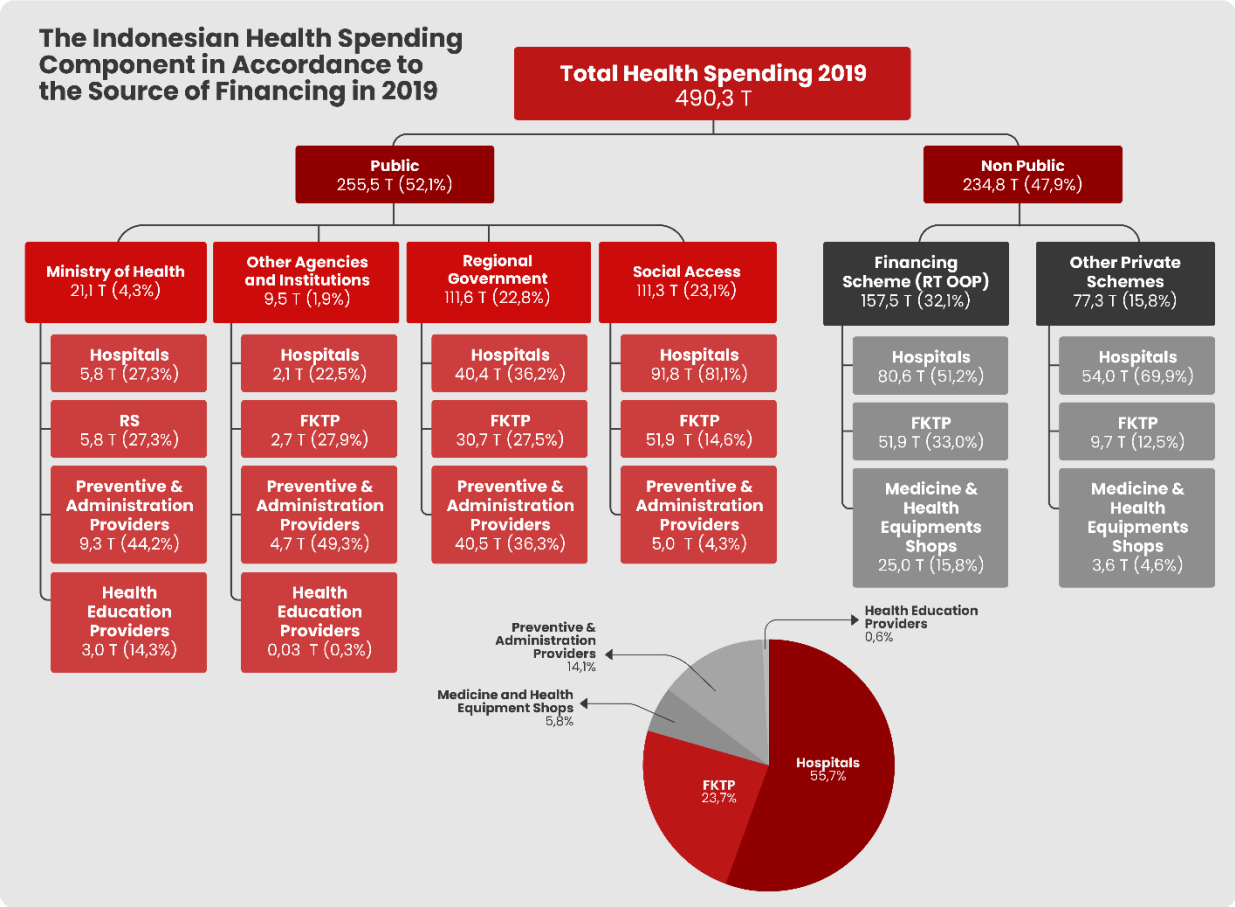


Chart 9. Components of Indonesia's Health Spending by Provider in 2019

At the sub-national level, at least in aggregate, the average health spending in all districts reaches 10% of the APBD. But a quick assessment in 44 districts shows the health share of the Regional Revenue and Expenditure Budget (APBD) varies from 3% to 18%. Regional budgets for health are also still heavily dependent on transfer funds from the central government except for HIV, TB, malaria and immunization programs which are significantly dependent on donor funds. On a national average, the dependence of APBD on Transfers to Regions and Village Funds (*Transfer ke Daerah dan Dana Desa*- TKDD) is 80.1%. Meanwhile, the contribution of Regional Generic Income (Pendapatan Asli Daerah - PAD) is only around 12.87%.

Fiscal dependence on the central government is even worse for municipality/regency governments. In fact, it is at this level that the emphasis on regional autonomy and fiscal decentralization is placed. Approximately 75% of the General Allocation Fund (*Dana Alokasi Umum*-DAU) is allocated for workforce expenditures, limiting the flexibility of districts to finance

the needs to achieve MSS targets. Although the shift towards greater budget support for primary health care is evident in Special Allocation Fund (*Dana Alokasi Khusus*-DAK) earmarks, especially physical DAK, the allocations are determined based on specific formulas and proposals from local governments, not performance.

Shifting Puskesmas financing from supply-side financing, which is political will-based, to that which is grounded on performance may give the opportunity to improve efficiency and increase service accountability. JKN (9.2% of the municipality/regency health budget) is underutilized to improve health outcomes, supply-side readiness, and attract private involvement to provide health services. Performance-Based Capitation (*Kapitasi Berbasis Kinerja*-KBK) where the reduction mechanism hass been relaxed[6] reduces the effectiveness of the KBK to encourage performance achievement. This slack also reflects the current needs of BPJS Health which presently is more focused on cost control rather than overall system performance.

Thus, if the increase in revenue and budget allocation is considered difficult and the option to reduce the benefit package is deemed inappropriate, then (i) managing the limited budget in a fair and efficient manner; and (ii) ensuring that payments for, or purchases of, health services are carried out in an allocative and technically efficient manner (Hsiao, 2007) must be made.

In both cases, BPJS-Health has operational autonomy to be responsible for balancing income with expenses through its main function as a strategic purchaser who makes performance-based payments. BPJS Health needs to work closely with the Ministry of Health, which has the authority to control other policy levers (provider payment methods, tariff setting, and quality monitoring). On the other hand, the Ministry of Health can utilize the authority of BPJS-Health as a payor to ensure compliance with clinical standards and guidelines through claims management.

In the realm *of* strategic purchasing, the collaboration between BPJS Health and the Ministry of Health will determine decisions related *to* what to buy, whom to buy from and how to buy. What distinguishes strategic purchasing from passive purchasing is the use of information and deliberateness or critical considerations as shown in Chart 10. below. These arrangements create financial incentives for service providers to contribute to achieving the health system's outcomes. Purchasing is strategic or active when buyers intentionally design and use evidence-based arrangements in selecting goods and services.

[6] In the first year of its implementation, the capitation payment may be cut up to 25% if the target and criteria is not fulfilled – offering significant funding to incentive Puskesmas. However, the payment cut has been lessened, from 2,5to 10%

Knowing health needs and available services	Knowing available budgets and maintaining balance
Use evidence of health needs and available services, medicines, and technology	Use purchasing instruments to manage spending

Deciding what services to buy	Deciding from whom services will be purchased	Decide how to purchase the service
• Define benefit packages and their extensions • Decide which intervention/service/drug to buy (including type and quantity) • Define service delivery methods and quality standards	• Select a service provider to contract • Choose a drug supplier • Contract with private providers	• Establish contract terms • Select and design a provider's payment method • Monitor provider and system performance (service utilization, efficiency, quality, and financial protection).

Chart 10. Arrangements to create financial incentives

Deciding What Services to Purchase

JKN provides participants with access to a comprehensive package of necessary health services, including a comprehensive Puskesmas (Presidential Regulation No. 12 of 2013 Chapter IV on Health Care Benefits). Promotive and preventive services include individual health counseling, basic immunization, family planning, and health checks. The Puskesmas service package is further defined by the Ministry of Health in terms of minimum service standards for health services at "first-level health facilities" (FKTP). The minimum service standards include 144 competencies (services) that must be provided by Puskesmas according to Ministry of Health Regulation No. 5 of 2014 on the Clinical Practice Guidelines for Primary Care Physicians. However, of the 144 conditions intended to be treated in primary health care facilities, the national guidelines available are only for 51 types of diseases. The existence of a new profession, namely Primary Service Family Medicine Specialist (Sp. KKLP) which provides quality, more comprehensive services and is proven to have a good impact on community health has the potential to provide a profitable service purchasing strategy in the context of strategic purchasing.

Deciding Who to Purchase Services From

The decision to determine from whom the service will be purchased is related to the process of empanelment, credentialing, licensing and accreditation. Licensing (ensuring that only qualified, trained individuals can provide services) is a sub-process of credentialing. Credentialing (the ability to identify qualified service providers to be considered for contracting) is an empanelment (the process of assigning patients to service providers within the BPJS-Health network with consideration to the patients and their family's preferences). Accreditation is a quality assurance process that is usually set above the average minimum standard determined by the credentialing process.

Credentialing ensures that all health services in the BPJS-Health network have the competencies they claim, have no significant performance issues, and have a good professional reputation. Since credentialing collects information about provider locations, services offered, and past performance, it helps BPJS-Health make strategic decisions in determining the right mix and distribution of providers to meet the beneficiaries' demands.

BPJS Health can only have a contractual relationship with health providers who have accreditation certificates (Ministry of Health Regulation No. 71 of 2013). The Regency Health Department in collaboration with BPJS Health conducts credentials for Puskesmas organizers. Minister of Health Regulation Number 99/2015 stipulates the credential criteria that the BPJS Health must consider in contracting with hospitals and primary health care providers (Puskesmas). Additionally, Presidential Regulation No. 19 of 2016 rules that all Government health facilities must meet the standard requirements to participate in the National Health Insurance Program (JKN).

In selecting health facilities to be contracted, BPJS Health not only considers the extent to which the facilities meet regulatory standards, but also whether they have a quality commitment that will continue to be monitored. For health facilities that renew their contracts with BPJS Health, they must go through a continuous credentialing process that includes: a) human resources; b) completeness of facilities and infrastructure; c) service coverage; and d) service commitment.

Unfortunately, data that can assist the process of empanelment, credentialing, licensing and accreditation is stored in a separate database at the Ministry of Health. Regency/Municipality health departments offices also keep to themselves the licensing status of public and private service providers – both of which are not regularly reported to the Ministry of Health nor to BPJS Health.

Deciding How to Purchase Services

Salaries and fee for service are now combined with capitation and performance-based components to promote higher motivation and productivity at the Puskesmas level. Only local governments with better fiscal capacity can set higher salaries, implement new incentive structures to reward performance, and narrow the gap between the highest and lowest paid

civil servants. In regions with low fiscal capacity, there are missed opportunities to motivate quality and performance improvements.

Fee for service payments include obstetric and neonatal services, such as prenatal care, normal delivery, etc. For midwives under Puskesmas with financial autonomy (Regional Public Service Agency-BLUD), BPJS Health transfers funds to Puskesmas which then pays the funds to the midwife. For midwives at non-BLUD Puskesmas (the majority), BPJS Health transfers funds to the regency health department, which then pays the midwives. The mechanism varies in different regencies because it is based on local regulations and there are anecdotal stories that village midwives often do not receive these transfers. For private midwives, BPJS Health transfers funds directly to their accounts.

Capitation can be defined as a payment system in which a payment agent pays a healthcare provider a fixed amount per insured patient for a defined set of benefits for a specified period of time – regardless of how much health care the patient actually uses. The theoretical advantages of capitation include the ability of the purchaser to control costs for a range of services, and incentives for service providers to maintain the health of the covered population (through good quality preventive and care services) so as to minimize the use of expensive curative health care. To be effective, a capitation-based payment system requires that the payer has an effective quality monitoring system, and the provider is held accountable for under-delivery of services or over-referrals. If there is no mechanism to monitor and hold providers accountable for quality, providers receiving capitation payments have an incentive to cut costs by reducing or lowering service quality.

The facility receives fixed payments based on the number of registered JKN recipients, namely those who receive health insurance contribution assistance (*penerima bantuan iuran*-PBI) who live in their coverage areas, and non-wage workers (*pekerja bukan penerima upah*-PBPU) who have chosen the facility as their primary service provider. The average capitation payment per JKN member per month is IDR 6,158. Puskesmas receive the lowest average capitation per patient—Rp 5,447 per member per month—but tend to have a large population in their catchment area. Average capitation payment per registered member in other types of facilities range from around IDR 8,000 to IDR 10,000. The variation in average capitation payments per participant across island groups is driven by the relative mix of facility types, from the highest (Rp 6,366) in Java, where there are more private facilities, to the lowest (Rp 5,163) in eastern Indonesia, where Puskesmas dominate the majority of primary health care.

The capitation rate is considered low and is only based on consideration of supply side readiness without any relation to service needs, so it is not risk-adjusted, especially for private clinics. Currently there is no adjustment for age/gender or other indicators of health need, only service readiness, including size of facilities, and the presence of certain types of health workers (dentist, nurse, midwife, doctor); the ratio of patient contacts for certain health services; accreditation indicators; and the number of opening hours. Permenkes No. 52 of 2016 Article 5 stipulates a special capitation rate for remote areas, but the amount is considered too small to

compensate for the practice of doctors there. The lack of adequate adjustments to accommodate differences in the costs of primary care provision in different geographic locations has been pointed out by many stakeholders.

The capitation rate is also detrimental to private providers, as BPJS Health pays the same rates to public and private providers, even though the public ones are subsidized by the government, covering the salaries of health workers and investment costs. In addition, private providers complain that their fee structure is also different because unlike public providers, they cannot access drugs at favorable prices through the government procurement system and they do not have tax-exempt status.

Capitation payments are channeled to the FKTP based on the number of residents who choose the provider through BPJS registration. BPJS private primary care clinics maintain a list of registrations on the PCare website, and in principle providers can access the list at any time, but they are not notified when someone is added or removed from the facility list. Several FKTPs complained about the unavailability of data regarding the number of participants registered in their facilities, namely information needed to conduct education and preventive and promotive measures. Several stakeholders noted some issues with PCare and questioned whether this data source could be used effectively as a management tool.

The distribution of registered participants across FKTPs is highly disproportionate to an alarming degree. Although the target average ratio of registered JKN participants per doctor in FKTP is 5,000:1, the ratio exceeds 8,500:1 for the Puskesmas in 7 provinces. In contrast, FKTPs that are not Puskesmas have a much lower ratio, usually below 1:2,500. Private service providers in particular appear to be at a disadvantage in terms of participant distribution. Some of these imbalances may reflect enrollment patterns inherited from the Public Health Security (*Jaminan Kesehatan Masyarakat*-Jamkesmas) and other previous programs and have not been updated to reflect the distribution of new residents under JKN.

The ratio of registered patients to doctors that is too high or too low is equally problematic for capitation payments. If the ratio is too high, registered participants may not have timely access to the required Puskesmas services. If the ratio is too low, the capitation income for the facility may not be sufficient to provide the necessary medicines, supplies and other inputs, or even to remain financially viable.

Government-owned Puskesmas receive many supply-side subsidies from other sources, as described above. For these facilities, capitation payments serve as a "top-up" rather than prospective payments designed to cover the full cost of providing the service. On the other hand, privately owned clinics do not receive any other subsidies from the government supply side. While capitation payments are slightly higher for private clinics, the amount effectively covers only a fraction of the cost of their full service. This is a disincentive for private facilities to be in contract with BPJS.

The use of capitation funds paid by BPJS Health to the Puskesmas or sub-regency offices is regulated in Presidential Regulation No.46/2021. This Presidential Regulation was issued to provide clearer guidelines on how capitation should be managed to avoid multiple interpretations at the regional level and to reduce the potential for SILPA (*surplus anggaran* or budget surplus) in public facilities (as in the Ministry of Finance's view, SILPA is an idle fund). Article 7.3 states that unused funds in the current fiscal year will be used by BPJS as consideration for allocating payments for the next fiscal year. The aim is to encourage Puskesmas to use the funds. This has the potential to create a misleading incentive to disburse funds for activities that are not actually needed or burden FKTPs with limited capacity.

It is recommended that Puskesmas be given more flexibility to manage their own finances, and indeed a number of facilities have been converted into BLUD Puskesmas, which allows them to manage their own finances. Local governments have also been advised not to over-exploit Puskesmas for revenue purposes. According to Presidential Decree No. 32 although the Puskesmas has not been converted to a BLUD, the capitation funds no longer go to the regional treasury but go directly to the Puskesmas account, but still require approval to spend the money stored in the regional treasury.

Even in autonomous Puskesmas, complicated rules regarding the allocation of capitation income lead to low absorption in some cases. Thus, the potential for capitation to improve the quality and efficiency of health care is hindered by the low utilization of funds in the public sector. Although the capitation funds are directly transferred to the Puskesmas bank account, 40% of the funds that could have been allocated for operational expenses are often not used. In 2018, more than IDR 2.5 trillion (USD 175 million) of capitation funds was deposited in Puskesmas accounts. This is because 85% of Puskesmas reported that they were unable to spend all of the capitation funds they received in 2015.

The three biggest reasons for the low utilization of these funds are the unclear regulations governing the use of fragmented funding sources, weak public financial management capacity, and an unresponsive healthcare market. Unclear guidelines and regulations on how to use funds from various sources and different reporting requirements between budget sources trigger administrative burdens for Puskesmas, because they need to ascertain which funds can be used for what activities. Also, FKTPs tend to make lower income estimates from capitation in the budget planning process. This results in low utilization because the Puskesmas are unable to spend the funds they have. The underutilization of funds is also due to the unresponsive health service market, because medicine procurement in small quantities at the puskesmas level is not very attractive to suppliers.

In addition, the administrative load burdens the expense reporting process. There are different cash accounts for each funding source (e.g. JKN, MoH budget, APBD) with different financial statements for each account. Different healthcare facility staff members must complete financial statements for each account, so clinical staff spend a lot of time on financial reporting. Absorption of capitation income at the Puskesmas level also encountered several obstacles,

especially to ensure that only 40% is spent for operational expenditures for fear of violating regulations and spending funds inappropriately.

There has been good progress in contracting and provider payments for Puskesmas under JKN, but several implementation challenges have limited the impact of this purchasing mechanism on the of FKTPs' service delivery, quality and efficiency. Referral rates remain high, and an imbalance in BPJS spending between Puskesmas and higher levels of care persists.

The unequal distribution of JKN participants across FKTPs is a major concern, creating a high risk and low ratio of participants to doctors. The current capitation payment system places rural FKTPs at a disadvantage as there is no adjustment for the higher fixed costs associated with serving the population in rural and remote areas. These losses will be exacerbated when performance-based pay cuts are put into practice and rural providers are more likely to be penalized for not meeting contact rate targets.

Although progress has been made to produce better Puskesmas level data through PCare, stakeholders have raised some concerns about the system. Not all Puskesmas have access to PCare data, so they cannot use it to manage the health needs of their registered population, and performance evaluations become not transparent. Another concern is that Puskesmas, private FKTPs, and the Regional Health Department does not have a mechanism to identify registered JKN participants for each FKTP and PCare data are not linked to hospital utilization data, so the data has limited value or usefulness for policy making, planning and budget allocation. both at the central and regional levels. BPJS Health is in the process of developing a dashboard portal for stakeholders (Ministry of Health, District Health Offices, associations of health service providers and professional organizations) to improve their access to available data.

A more common concern associated with all payment systems used to purchase services under JKN is that they are fragmented across different levels of care with no link between capitation for Puskesmas and the INA-CBGs payment system (applications that file claims for Hospitals, Puskesmas and Health Service Providers (*Penyedia Pelayanan Kesehatan*-PPK) for the poor for secondary and tertiary services.

4.1.4. Engagement of communities and other stakeholders

As the party in charge of the implementation of health development in their working area, puskesmas require active support from the community as the object and subject of development. The involvement of the community and other stakeholders from all sectors is to define the existing health problems and their solutions by setting priorities for action through policy dialogue. This active support is realized through the establishment of the Puskesmas Supporting Agency (*Badan Penyantun Puskesmas* BPP) which gathers various community potentials, such as community leaders, religious leaders, NGOs, community organizations, and the business world. The BPP plays a role as a partner for the Puskesmas in the transformation of primary health care.

In fact, community involvement, especially in rural areas, is accommodated in the Ministry of Health Regulation No 564 of 2006 on the Guidelines for Implementing the Development of *Desa Siaga* (Alert Village), which is a village concept where the community is prepared both in terms of resources and capabilities to prevent and overcome various health problems and disasters. However, there are several problems in community empowerment in the health sector in the *Desa Siaga* program, namely: first, the paradigm of healtiness as a health development paradigm has been formulated, but has not been understood and applied by all parties. Second, the Law of the Republic of Indonesia No. 32 of 2004 on Regional Government stipulates that the regions (regencies/municipalities) have the full authority in the health sector, but this authority has not been implemented optimally. Third, the revitalization of Puskesmas and Posyandu only means the fulfillment of facilities. Fourth, the regency/municipality health departments carry out more administrative tasks. Fifth, community involvement remains ambiguous, which connotes compliance more than participation and not community empowerment (Sulaeman, et al., 2012).

Health cadres in Posyandu have a role in changing the behavior of the surrounding community to implement a clean and healthy life in the household. Community empowerment through Posyandu cadres can be utilized in the preventive and promotive realm. In the process, the implementation of public health efforts in the community requires non-health workers who have competency in social and humanities disciplines.

The cultural approach is very important in changing behaviors by involving graduates of the social humanities degree. Community involvement in the transformation of primary health care automatically involves the community in various efforts to maintain their health. Health cadres can be an extension of the Puskesmas to monitor sick people, toddlers with nutritional problems, pregnant women, tuberculosis (TB) sufferers and so forth. Additionally various elements, such as civil society organizations, can also play a role in strengthening primary health care.

The community empowerment process needs to be accompanied by a facilitator whose role is to influence the decision-making process carried out by the community in adopting innovation (Mardikanto, 2010).

The use of behavior change communication strategies applies targeted messages and tailored approaches to promote healthy behavior and reduce risk taking. Behavior change communication, also known as social and behavioral change communication, includes health communication, social and community mobilization, and development of information, education and communication strategies (Koenker, et al., 2014).

The cultural approach is very important in recognizing local knowledge, behavior, and traditions that apply in a community related to health aspects, both regarding the introduction and improvement of health conditions, as well as the prevention and treatment of diseases. This understanding can be the basis for formulating an education-literacy strategy by health workers in collaboration with non-health workers from social-humanities disciplines through inclusive-participatory communication. The education-literacy program aims to enrich the knowledge and thinking framework of community members, change residents' behavior, and establish cultural institutions to support primary health care. In Primary Health Care (PHC), community empowerment and their involvement in efforts to maintain the health of themselves and members of the community is a significant and essential aspect. Education-literacy and counseling programs can be organized and established by facilitators (health and non-health workers) through the involvement of formal and informal community leaders, existing health cadres and those who will be developed in accordance with the social structure of the community. Health cadres can become extensions of Puskesmas and other institutions within the scope of the PHC to monitor sick people, toddlers with nutritional problems (stunting), pregnant women, people with infectious and non-communicable diseases, and so forth. Various elements of the society, such as non-governmental, philanthropy, and practitioner/researcher organizations can also be involved to play a role in strengthening services and establishing primary health cultural institutions.

Community empowerment activities guided by facilitators in collaboration with formal/informal leaders and health cadres are aimed at enabling community members to be able to make independent and appropriate decisions in strengthening healthy behavior, reducing negative risks for self and communal health, and utilizing primary health care services effectively. The ability to adopt innovations introduced in preventing and controlling the spread of certain diseases can also be developed (Mardikanto, 2010).

In the discipline of public health, behavior change communication includes health communication strategies and programs, as well as social and community mobilization (Koenker, et al., 2014).

4.2. Operational Levers

4.2.1. Models of care

The dichotomy between Individual Health Measures (UKP) and Public Health Measures (UKM)[7] has been going on for a long time and has given rise to various opinions about the ideal scope for primary health care. Puskesmas are considered too curative. The limited capacity of primary health care is considered insufficient to run at least 18 national programs from the Ministry of Health in the promotive - preventive realm. Therefore, to reduce the workload of primary health care, some experts suggest delegating the curative domain to type D hospitals and the private sector.

The proposal is urban biased and is not in line with the concept of performance-based capitation. The concept of primary health care as a gatekeeper which includes four main domains, namely first contact care, continuity care (service coordination function), coordination care and comprehensiveness care (Starfield, 1994 in Wulandari & Achadi, 2017) are needed by the community, especially for those who live in the area where the health center access is the only available and closest health service. The exclusion of promotive and preventive aspects in the therapeutic relationship (UKP) is also inappropriate, because a doctor in his efforts to treat patients can take three levels of prevention: (1) primary prevention to avoid risk factors (eg immunization); (2) secondary prevention or early detection of disease (eg, pap smear examination); (3) tertiary prevention to reduce complications.

Comprehensive and integrated health services to address most of the various kinds of health problems in the community are more efficient than relying on separate services for specific health problems, because integrated health services have better knowledge of the population in their working areas and can build greater public trust. Health services that offer a wider range of services can increase the uptake and coverage of services from programs, for example prevention programs such as cancer screening and vaccination. These health services can prevent health problems and complications and increase the impact of better health (WHO, 2008a).

4.2.2. Primary health care workforce

Overall, there is a strong positive correlation between the availability of health workforce and the coverage of health services. In any country, a well-performing health workforce is an available, competent, responsive and productive workforce. To achieve this, actions are needed to manage the dynamics of the entry and exit of health workers into the labor market, distribution between health facilities and regions and their performance (WHO, 2008b).

[7] Based on Minister of Health Regulation No. 75 of 2014 on Puskesmas, it is stated that the definition of UKM is Public Health Measures, hereinafter abbreviated as UKM, and it includes any activity to maintain and improve health as well as prevent and overcome health problems with the target of families, groups, and communities. Meanwhile, UKP is an Individual Health Measures, hereinafter abbreviated as UKP, referring to any activity and/or a series of health service activities aimed at improving, preventing, curing disease, reducing suffering due to disease and restoring individual health.

The dynamics of the labor market for health workers is influenced by the division of labor between the Center and the Regions. Policies for the procurement and distribution of health workers should be based on the health needs of certain populations. For example, an area with a high rate of endemic disease transmission requires a team of health workers that is more than doctors-midwives-nurses, such as epidemiologists, laboratory analysts and sanitarians.

Although the number on paper has met the minimum standards of WHO, the availability of human resources for quality health remains the biggest obstacle. From the production side, health education institutions with low accreditation contribute to the low quality of graduates. They lack in-service training to increase human resource capacity. Of the 34 provinces, Papua has the highest proportion of health services without trained health workforce (Balitbangkes, 2017).

Another key issue among others is the unequal distribution. Contrary to popular belief, financial incentives are not the only attraction for working in remote areas: management and provision of health facilities and professional development are also considered important. The Healthy Nation Program and the Individual Special Assignment Program seem to be the main solutions for the Ministry of Health to address the maldistribution of Health Workforce.

Investment in human resources, especially health workers, is needed for doctors to take additional specific education in primary health care. In order to overcome the disparity in the quality of doctors in primary health care, the acceleration of the implementation of primary care family medicine specialists is supported by Minister of Education and Culture Regulation No. 1 of 2020 on Primary Service Doctors. The Ministry of Education and Culture, Research and Technology is also preparing updates on the competency standards for Indonesian doctors, internship programs, and competency tests for medical professional education students.

Another innovation is the establishment of an academic health system which is an integrated collaboration between the health and the education system. Within this framework, a Joint Committee of the Ministry of Health and the Ministry of Education, Culture and Research has been formed. It started with the functional integration of the Teaching Hospital with the Faculty of Medicine at five Universities and Main Teaching Hospitals. Then it was expanded into a system covering other faculties such as the Faculty of Dentistry, Nursing Pharmacy, Public Health; while in the service sector it is extended to hospitals at lower referral levels up to the primary services such as puskesmas. Ideally, the Regional Department of Health, which is responsible for health development in an area, joins this system. In this way there is synergy between the functions of service, education, and research which will lead to an increase in the quality of services, the suitability of the health workers production with the needs and distribution of health workers. Faculties of Medicine should also start to build not only teaching hospitals but also primary education clinics.

The role of the social community demands a cross-disciplinary approach, not only health, medicine or nursing and so on, but the social humanities approach is also important because educating and improving health literacy in the community requires specific skills. The transformation of primary health care cannot be separated from that of human resources who work in them. Capacity and competence building should be adjusted to the needs of the community. Restructuring from the Ministry of Health level to the Puskesmas must be readjusted and connected to each other. Educational institutions support by providing post-graduate education for health workers who work in primary care. In addition to doctors, the development of health workers is also carried out for health promotion workers and community nurses. Curriculum in medical education and other health workers must also be oriented to solving problems in the field.

In terms of human resources competencies for primary health care management, the Head of Puskesmas has a significant role in determining the direction and movement of the Puskesmas in public health services. Good leadership from the Head of Puskesmas enables teamwork, encourages participation, and develops the ability to work professionally. Capacity building needs to be done through Puskesmas management training and leadership training for Heads of Puskesmas. Additionally, during 2015-2016, only 30.1% of health services and their support staff received training and health care management.

4.2.3. Physical infrastructure

Density and distribution of Puskesmas[8] refers to the physical location of the facility and its distribution relative to the population. The number and type of facilities required in a country or region depend on the needs of the population and the type of service or model of care. The ratio of Puskesmas to sub-regencies nationally is 1.39 (Ministry of Health, 2019). The growth of Puskesmas in the last five years was only 4.5%, from 9,767 Puskesmas in 2016 to 10,203 in 2020, much different from the number of hospitals in the same period which has grown by 19.7% from 2,045 to 2,449 (Ministry of Health, 2021a).

Based on the results of the 2019 National Health Facilities Research (*Riset Fasilitas Kesehatan*-Rifaskes) report, from a number of Puskesmas samples in the provinces surveyed, 99.2% of 9,909 or around 9,831 Puskesmas were known to have services, 0.16% (16 Puskesmas) had no services, 0.29% (29 Puskesmas)) changed its function and for 0.09% (9 Puskesmas), no buildings were found. In relation to the proportion of electricity availability from the total sample of Puskesmas by province with electricity (ie 9,627), it was found that 90.5% (8,716 Puskesmas) had 24-hour electricity access, 3.5% (333 Puskesmas) had > 12 hours but < 24 hours access, 4.4% (427 Puskesmas) had 6-12 hours, and 1.6% (151 Puskesmas) had <6 hours. Not the least important infrastructure in primary health care is clean water source, and the 2019 Rifaskes noted that from 9,831 Puskesmas surveyed, 3,556 Puskesmas used water sourced from drinking water companies (*Perusahaan Air Minum*-PAM), 3,306 from drilled wells, 1,741 from dug wells, 643 from

[8] FKTPs include Puskesmas, Independent Practitioners, Primary Clinics and Type D Hospitals. The limited data regarding FKTPs other than Puskesmas means that the data presented is only about Puskesmas.

springs, 268 from rainwater reservoirs, 159 surface water, while the remaining 158 use other sources of clean water.

In the room section of the Puskesmas, a survey was also carried out which aimed to determine the availability, condition and function of the rooms along with its facilities and infrastructure. The details of the rooms in the 9,831 Puskesmas in all provinces surveyed and their conditions are as follows:

Table 4. Puskesmas Room Condition

No.	Room	Number of Puskesmas with the Rooms	Condition (%)		
			Fairly good	Not adequately good	Not good
1.	Office administration room	9,515	94.3	5.3	0.4
2.	Office of Head of Puskesmas	9,635	95.8	3.8	0.3
3.	Meeting room	8,468	94.7	4.9	0.4
4.	Registration room and medical records	9,689	92.7	6.7	0.6
5.	Waiting room	9,539	94.7	4.9	0.3
6.	General examination room	9,748	95.2	4.4	0.4
7.	Treatment Room	8,484	94.2	5.3	0.5
8.	Immunization, family planning and mother and child health	9,746	94.8	4.8	0.4
9.	Dental and oral health room	8,629	96.2	3.5	0.3
10.	Breastfeeding room	5,997	90.4	8.4	1.1
11.	Health promotion room	7,808	94.4	5.1	0.4
12.	Pharmacy room	9,713	93.4	6.1	0.5
13.	Delivery Room	7,258	94.4	5.1	0.5
14.	Post-delivery care	6,298	94.4	5.1	0.5

No.	Room	Number of Puskesmas with the Rooms	Condition (%)		
			Fairly good	Not adequately good	Not good
15.	Laboratory	9,081	91.7	7.4	0.9
16.	Sterilization room	5,614	89.2	9.7	1.1
17.	Food service room	3,955	89.8	9.3	0.9
18.	Emergency room/ER	7,492	94.0	5.5	0.5
19.	General warehouse	7,531	77.3	19.4	3.3
20.	Official residence	7,279	77.6	17.0	5.4
21.	Garage	6,023	86.5	11.7	1.8
22.	Special room for examination of TB patients	6,007	90.9	8.0	1.0
23.	Special room for examination of MDR TB patients	3,352	91.7	7.2	1.1
24.	Special examination room for infected patients	1,564	92.5	6.4	1.1

Source: Rifaskes, 2019

The health laboratory is one of the supporting facilities in the implementation of health service efforts. Health laboratories are needed to examine, analyze, describe, and identify materials in determining the type of disease, the cause of the disease, and certain health conditions. The number of health laboratories based on the 2019 Indonesia Health Profile is owned by the private sector, which is 1,056 laboratories. By 2020 this number has increased to 1,275 laboratories and 174 of them have been accredited.

The 2020 Indonesian Health Profile noted that the second largest owner of health laboratories was district/city governments, which were 228 laboratories; this number is an increase from the previous year's number of 206. The third largest owner of health laboratories is the provincial government, which is 27 in 2019, which in 2020 will increase to 28 laboratories. Health laboratories are at least owned by the Ministry of Health, namely 4 Health Laboratory Centers which are in charge of health laboratories spread across Indonesia. (Ministry of Health RI, 2020; Ministry of Health, 2021a).

The increase or addition of these health laboratories is a marker of the government's response to the handling of the COVID-19 pandemic that has occurred in the last 2 years.

The room conditions of the 4,090 inpatient Puskesmas in all provinces as a result of the 2019 Rifaskes are as follows:

Table 5. Room Conditions at Inpatient Puskesmas

No.	Room	Number of Puskesmas with the Rooms	Condition (%)		
			Fairly good	Not adequately good	Not good
1.	Inpatient room	4,034	91.6	8.0	0.4
2.	Inpatient room for infectious disease patients	1,286	90.5	8.5	1.0
3.	Staff room	3,733	92.0	7.5	0.4
4.	Patient bathroom/WC	3,972	85.6	12.8	1.6
5.	Laboratory	2,553	93.1	6.1	0.8
6.	Laundry room	1,743	85.3	12.9	1.8

Source: Rifaskes, 2019

Percentage of bed conditions from 4,094 inpatient Puskesmas, 64.7% are in entirely good condition, 30.5% mostly good, 4.3% mostly bad, and 0, 4% all bad. Overall, Rifaskes 2019 also collected proportional data related to the condition of special buildings for inpatient Puskesmas based on several categories as follows:

Table 6. Condition of Inpatient Puskesmas Building by Category

Characteristics	Health Center Inpatient N	Building Condition (%)			
		Good	Mild Damage	Moderate Damage	Severe Damage
Health Center Category According to the Establishment Decree					
Without Establishment Decree	403	82.1	12.7	3.5	1.8
Urban	733	88.0	9.0	2.7	0.3
Rural	2,007	85.2	11.2	2.8	0.8
Remote	959	71.9	19.4	7.2	1.5
PKM (Penyuluh Kesehatan Masyarakat-Public Health Advisor) Accreditation Status					
Unaccredited	589	67.9	19.5	9.5	3.1
Basic	1,148	81.4	13.8	3.9	0.9
Madya	1,944	84.9	12.0	2.5	0.6
Utama	398	92.2	4.8	2.8	0.3
Plenary	23	95.7	4.3	0.0	0.0
Status of Puskesmas Financial Management Category					
BLUD	1,278	86.2	10.1	2.9	0.9
Non BLUD	2,824	80.5	14.1	4.4	1.0

Source: Rifaskes, 2019

4.2.4. Medicines and other health products

In the context of decentralization, the provision and budget management for medicines and essential health equipment in the public sector is borne by local governments. However, the central government still has the authority to ensure adequate supply of drugs and buffer stock as well as to ensure the safety, efficacy, and quality of drugs.

Medicines, vaccines and medical devices remain a major challenge. The Drug Needs Plan (*Rencana Kebutuhan Obat*-RKO) form has not been developed optimally. The shortage or absence of medicines/medical devices in government-owned health services is due to the limitations of the Puskesmas and the Regional Governments' Health Departments in preparing the RKO and applying the e-catalog. Most of the planning still uses RKOs based only on previous consumption/use and it is difficult to anticipate dynamic needs related to changing disease patterns or increasing program coverage.

Drug orders made by health care facilities are also often not fulfilled. The supplier's perspective are the long lag time between order and delivery (in some cases even more than six months), overdue purchase payment arrears, expensive shipping costs, minimum order requirements

not being met, and drugs not being included in the e-catalog (currently around 8% of national formulary drugs have not been included in the e-catalog) (Bappenas, 2019).

Additionally, although the availability level has reached 96.82%, drugs and vaccines have not been evenly distributed between provinces, which reflects the poor logistics management. Only 35.15% of Puskesmas and 41.72% of Hospital Pharmacy Installations have standard pharmaceutical services. There is a stark gap in the availability of drugs and vaccines between public and private health facilities.

The use of generic drugs increased, but rational drug use in health care facilities only reached 61.9%. This is mainly due to the low application of formularies and guidelines for rational use of drugs, which unfortunately cannot be monitored by the current reporting system.

On the other hand, very few people know about the intricacies and benefits of generic drugs, namely 17.4% in rural areas and 46.1% in urban areas. As many as 35% of households reported storing drugs including antibiotics without a doctor's prescription, which is evidence of low-level public knowledge about drugs (Ministry of Health, 2019).

4.2.5. Engagement with private sectors providers

Non-government service providers play an important role in the delivery of health services in Indonesia. First, as in many low- and middle-income countries, the private sector is often the preferred choice of service provider – even among the poor – because it is perceived as having higher quality and availability of medicines. Nearly two-thirds of outpatient utilization and two-fifths of inpatient use of health care services occurs in the private sector in Indonesia. Second, civil society organizations (CSOs) - including non-governmental and nonprofit organizations - are an integral part of Indonesia's national response to human immunodeficiency virus (HIV), tuberculosis (TB), and malaria.

Based on data from the Bank of Indonesia (BI) and Banking Supervisory Agency (*Lembaga Pengawas Perbankan*- LPP) as of July 2021, as many as 14% of JKN participants or around 26.7 million people out of 194 million active BPJS participants are registered at private clinics. A total of 24% of the Cooperation FKTPs are private clinics and 22% of the total capitation (approximately IDR 1.8 trillion from IDR 8.2 trillion) is paid to private clinics. As many as 82.3% of the 26.7 million people stated that they were satisfied with the services they received from private clinics. This is why integration between Puskesmas and private clinics is important, apart from ensuring that 100% of the community can receive quality health services; it is also necessary to open partnerships and support for private clinics in order to be optimal in providing their services.

Meanwhile, most of the health programs implemented by civil society organizations depend on the resources provided by development partners. Indonesia can still access the Global Fund to manage AIDS, TB and Malaria until at least 2022. Although external financing represents a small part of overall health spending, it accounts for a significant share (40-50%) of resources

for HIV, TB, and malaria - meaning there will likely be significant gaps in service delivery if donor-supported activities are not taken over by the government (Magnani, et al., 2018).

It must be remembered that health services at the primary level are also provided by independent practicing doctors. There is no support from the government or development agencies/donors to ensure they provide quality services. In fact, if there is adequate support for this group, not only quality services are ensured but also ensure that these independent practicing doctors participate in national strategic programs.

There are two main mechanisms available in the APBN to channel public funds directly to civil society organizations. These channels are: (1) through procurement mechanisms (expenditures for procurement of goods and services; (2) through government aid or grants; and (3) cooperation mechanisms. Although there are mechanisms to accommodate almost every type of activity of civil society organizations, there are several challenges to its wider use. The common barriers cited by stakeholders can be grouped into three main themes: (1) lack of information; (2) limited capacity; and (3) a crisis of trust.

To facilitate collaboration between the Government of Indonesia and non-public service providers, a supportive environment is needed. This should include (1) addressing the information gap between Government budget holders and CSOs on all available opportunities; (2) strengthening current budget and planning processes including capacity building support for persons and beneficiaries' funds to prepare, submit, review and assess proposals; and (3) increase transparency and accountability of health sector performance.

4.2.6. Digital technologies for health

Digital technology for health is one of the prerequisites or enabling conditions for the transformation of comprehensive primary health care.

There are a lot of data related to the health sector in Indonesia; information is generated from 2,823 hospitals, 10,062 puskesmas, 85,000 clinics, and 21,852 pharmacies; the national health insurance scheme (Jaminan Kesehatan Nasional, JKN) alone produces more than 5 million transaction data per day (World Bank, 2021). Upstream, health information management in Indonesia is characterized by high fragmentation (Health workers must fill in the same information repeatedly, see Chart 11), poor data reporting compliance, manual input with non-uniform use of forms and indicators, non-compliance with data verification, and weak procedures for data storage and handover.

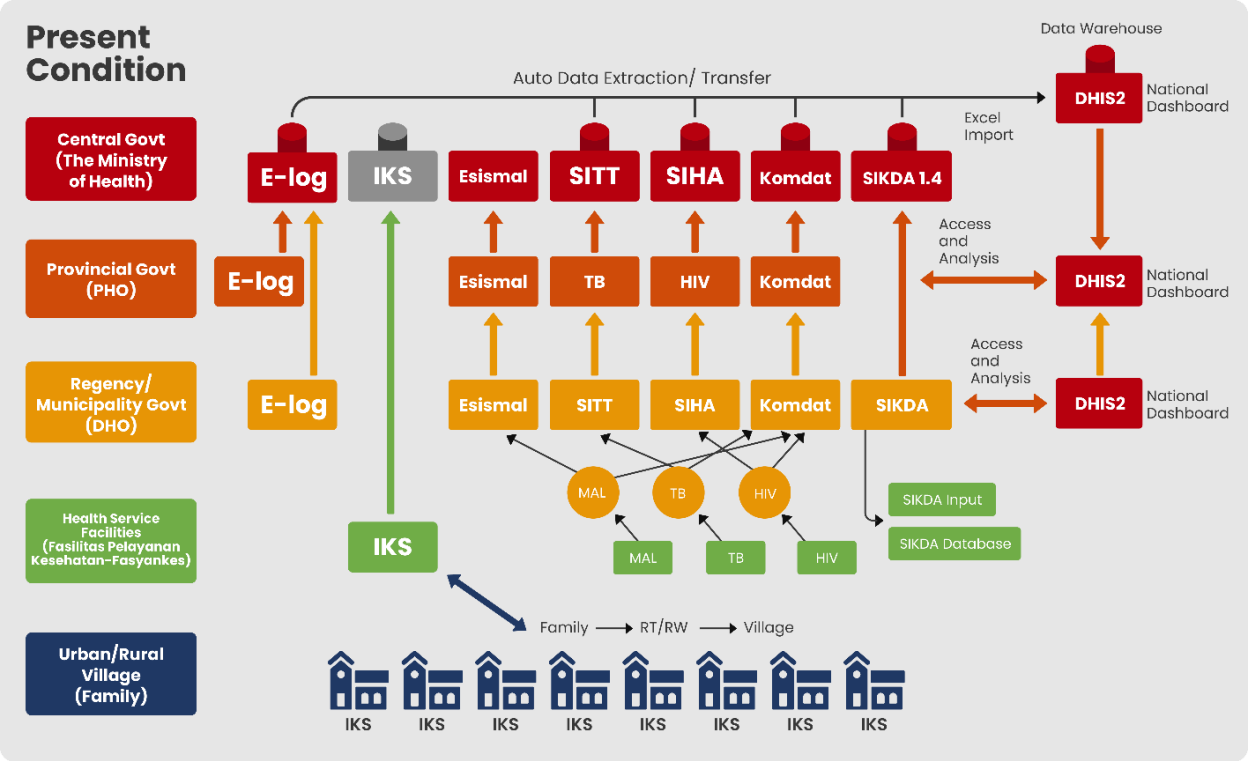


Chart 11. Fragmentation of the health information system in Indonesia

BPJS Health claim data, which is standardized, structured, and well-available, can actually become the backbone of health data analytics. Unfortunately, this system is not linked to other data sources, not even to systems belonging to the Ministry of Health such as SIAF (accreditation database) and others (which are listed in Chart 11). BPJS-Health membership data is also not connected to the Ministry of Social Affairs' targeting database (Social Welfare Integrated Data or *Data Terpadu Kesejahteran Sosial*-DTKS) and the Ministry of Finance's (tax database).

As a result, downstream, data analysts at the Ministry of Health and BPJS-Health find it difficult to explore the continuum of Health analytical data starting from descriptive analysis, let alone predictive and prescriptive analysis. Thus, the Ministry of Health was unable to extract the data to assist decision makers in answering policy-related questions.

One effort to overcome this is the establishment of the Ministry of Health's Data Transformation Office (DTO), which has three missions, namely to improve the electronic medical record system, simplify health service applications, and provide policy support to build an ecosystem so that innovation can become a game changer for health data management in Indonesia. However, focus must be placed not only on the management of big data (both in terms of volume, speed, data variation, and systems interoperability), but also on how data can be abstracted into new knowledge and findings.

The catalyst for effective data use is the ability of data architects/engineers to not only tinker with the hardware, software and connectivity-related matters, but also to understand healthcare workflows in service delivery at the front line. Forms for data entry and applications must be designed together with the people who will produce the data, namely frontline health workers, to ensure that the data collected is "correct" and the collection process is made as easy as possible. Thus, the need for data collection should be matched with the daily workflow of the health workers, or better yet, if it can help facilitate their work. If data entry becomes a burdensome requirement, the level of reporting compliance will be low and eventually information will not be collected.

Investing in a digital system at the grassroot level that enables digitization of operational procedures (e.g., patient registration, visit/treatment scheduling, medical records, prescription orders and laboratory tests, invoices and claims) is the best way to improve data quality. In addition, the establishment of a digital system at the grassroots level opens the possibility for health cadres working in the community to use it as an instrument to improve performance. Designing a user -friendly interface that can facilitate the day-to-day operations of health workers on the front lines will ensure that the data is collected in a complete and timely manner. Another way to improve data validity is to clarify the definition and range of the data. Digitalization is critical for Indonesia to achieve its goals of improving data integration and implementing advanced health data analytics. For example, electronic medical records (EMRs) will dramatically increase BPJS Health's ability to verify claims, ensure compliance with diagnostic and treatment guidelines. , and identify opportunities to improve quality and efficiency. EMRs can also enable the use of machine learning algorithms to recommend treatment options based on a patient's history and their risk profile. However, Indonesia may still need to invest first in data literacy and improve user skills and capacities. The recruitment and training of data scientists to analyze health data, particularly for actuarial and claims analysis, can be assisted through a special curricula or certification courses.

A data scientist/analyst with health sector knowledge should also work with policy makers to analyze data and answer important policy questions. Determining what data is needed, by whom, and intended to answer which policy questions. Reviewing existing data sources to identify whether the required data has been collected, by whom, how often, and in what format. Mapping the daily main tasks of each stakeholder will assist this identification process. The mapping will facilitate the prioritization of essential data collection based on operational needs.

4.2.7. Systems for improving the quality of care

The accreditation of primary health care facilities begins with the enactment of Ministry of Health Regulation no. 46 of 2015, and the establishment of the Primary Health Care Facility Accreditation Commission (*Komisi Akreditasi Fasilitas Pelayanan Kesehatan Dasar* - KAFKTP). While KAFKTP's current capacity is limited, its vision is to expand its capacity, achieve independence (though presently it is still part of the Ministry of Health), cover the public and private sectors, and eventually gain accreditation from the International Society for Quality in

Health Care. There are four levels of accreditation for basic health care facilities – basic, intermediate, primary, and exemplary– based on scores achieved in nine standard areas.

Facilities must be re-accredited every three years and accreditation will be a prerequisite for empanelment by BPJS Health from 2021. While public facilities have access to funds (DAK accreditation, APBD) to cover accreditation costs, private facilities are required to cover all costs (e.g., facilitator, rating evaluation) themselves.

In terms of financing, Indonesia uses a capitation payment system for all FKTPs that have been accredited and are part of the BPJS-Health system. Since the capitation rate is predetermined, this payment system reduces unnecessary care and gives providers more incentive to focus on health promotion, prevention, and early detection with the aim of keeping patients healthy. Capitation also facilitates transparency, ensures equitable allocation of health services, and encourages service providers to choose more efficient alternative treatments, especially for facilities that have autonomy in the use of funds.

Indonesia uses input-based capitation rates (public or private, number of medical staff, and whether the facility is located in a rural area), instead of predicting the health care needs of JKN participants and the average cost of providing services in 144 primary care centers (Puskesmas), which is under a capitation contract. Private clinics are paid 40% more because they do not receive funding from the government budget.

In 2016, the Ministry of Health and BPJS Health agreed to add a performance-based element to capitation payments, namely Commitment-Based Capitation (KBK). Combining capitation payments with performance indicators is expected to strengthen the system of ensuring accountability (checks and balances) for the autonomous use of the funds. KBK is based on the achievement of absolute targets that combine outcome and output. Since 2020, the amount of capitation funds in FKTPs has been set based on performance, which is self-reported through Pcare, in three indicators: i) number of contacts per 1000 population (the target is 150), ii) referral ratio for non-specialized services (the target is 2%) , and iii) the number of cases of controlled diabetes and hypertension (the target is 5%) (Table 7). The achievement of the referral ratio and contact number has a higher weight (50-40%) in the KBK score compared to the indicators of controlled hypertension and diabetes (10%).

Table 7. General Description of the KBK Design

No.	Indicator	Rating			
		4	3	2	1
1.	Number of contacts /1000 population	≥150	>145 - <150	>140 - 145	≤140
2.	Ratio of referrals for non-specialized cases	≤2%	>2 - 2.5 %	>2.5 - 3%	>3 %
3.	Ratio of controlled Prolanis participants (controlled hypertension and diabetes cases)	≥5%	4 - <5%	3 - <4%	<3 %
Capitation received based on KBK rating					
KBK facility score = total rating (weighted)		**4**	**3 - <4**	**2 - <3**	**1 - <2**
1.	Puskesmas	100%	95%	90%	**85%**
2.	Private clinic/D Primary Hospital	100%	97%	96%	**95%**

FKTP are penalized if they do not reach the targets of these specific indicators. FKTPs who have at least 150 contacts per 1000 population per month, refer at most 2% of patients for non-specialized services, and are able to control at least 5% of diabetes and hypertension cases will receive the full capitation allocation. For KBK scores below the maximum, Puskesmas are subject to a 15% penalty, while for private clinics it is only 5%.

The current Performance-Based Capitation Design (KBK) can still be improved. First, the analysis of BPJS Health membership data and claims can provide the basis for a risk-based capitation calculation formula to better reflect the variation in the delivery of required health services between regions. Second, review whether the current penalty is sufficient to encourage performance improvements. Third, consider reducing the weight of performance indicators that are easily attainable. Fourth, consider using incentives/disincentives to increase/decrease performance over time, rather than achieving absolute targets. Fifth, the achievement of outcome-based indicators such as diabetes and controlled hypertension depends on several factors beyond the control of the service provider, so they may not be the appropriate performance indicators.

However, health services are mostly carried out at the community level where JKN funding (capitation for primary health care) has no effect. Services below the Puskesmas/clinic level are carried out by volunteers (cadres) who are usually financed by the Village Fund with limited standards. The only option so that JKN can influence service quality at the village level is to

contract a village midwife to increase the reach of nutrition services, eg. counseling as part of the ANC/PNC (pregnancy examination/examination in postpartum mothers) and PMBA (*Pelatihan Kader Pemberian Makan Bayi dan Anak*-Training for Infant and Child Feeding Cadres). However, there are concerns that this allocation is at the discretion of the Village Apparatus, which is not standardized. Additionally, for midwives, increased involvement in outreach services may take time and resources from their already expanded responsibilities. Health Operational Assistance (*Bantuan Operasional Kesehatan*-BOK) may be a better source for outreach services and needs to be aligned with other payment mechanisms.

4.2.8. Primary health care-oriented research

Research and knowledge management, including the dissemination of lessons learned, as well as the use of knowledge are important elements to accelerate the improvement of strategies for success in order to strengthen the primary health care-oriented system (WHO, 2020). At the 2017 Evidence Summit for Maternal, Newborn and Child Health (MNCH) Conference, AIPI has collected gray literature. However, most of them are descriptive and the evidence quality is low, so it cannot be used as a basis for policy making and determining implementation.

The implementation of research results in primary health care is still lacking, so the strategy and use of technology in examinations is still mostly implemented at the referral level. Primary health care are only the object of policies that must follow WHO policies or general policies that are determined without any new research that may be more specific to primary health care. For example, at the initial examination for diagnosis, doctors only try to match symptoms with standard diagnoses for claims due to inadequate tools, and therefore research and development and regular audits are needed to standardize diagnostic and claim methods that involve the Ministry of Health and BPJS Health.

In order for the interdisciplinary paradigm to consistently underlie the approach and operation of PHC, it can also be considered to conduct research on the socio-cultural-environmental dimensions that may influence the success and failure of the implementation of PHC performance and community involvement in various locations. The lessons learned from such comparative study are also important for the development of PHC in the midst of a diverse Indonesian society.

4.2.9. Monitoring and evaluation

With regard to the core skills for program monitoring and evaluation (M&E), most of them are already present in the health system. Although it varies somewhat by program areas, in general staff skills for program monitoring are relatively strong at the central level and relatively weak at the regency level. However, the roles and responsibilities of the staff seem disorderly. Many program staff at all levels, but especially at the sub-national level, do not feel that M&E is their responsibility, and thus do not see their role as including checking the accuracy of the data submitted. There are not enough staff assigned to M&E responsibilities to compensate for this lack of engagement. The use of data for decision-making among program staff also appears

to be limited, and so is the systematic feedback from central to local levels. Staff turnover is a major constraint to capacity building efforts, particularly at the sub-national level where overall capacity is weaker. Capacity for further evaluation is more limited, but the Ministry of Health regularly engages experts from Indonesian universities to assist with this. The Ministry of Health underutilized GFATM (Global Fund to Fight AIDS, Tuberculosis, and Malaria) funding for the provision of technical assistance for capacity building, a practice that had to change in the last years of GFATM funding.

Chapter 5
Intersectoral connections: Towards Health In All Policies

"Many of the most important choices
that determine the outcome of a health emergency,
such as the COVID-19 pandemic,
occur long before the crisis itself strikes."
Tedros Adhanom Ghebreyesus

Having investigated the structural and discursive dimensions of primary health care reform, this sub-chapter will look beyond the current policy situation when identifying the drivers of change. Many of the drivers that will shape the development of primary health care will emerge from outside the policy area: social, technological, economic, environmental, political and value shifting factors (STEEPV). Therefore, the STEEPV panel was also asked to identify and prioritize important strategic issues. We asked a panel of expert resource persons on each element of STEEPV to rank each idea according to its importance for the sustainability of primary health care and the urgency of policy interventions.

The research team synthesized the resource persons' inputs for each element of STEEPV:

5.1 Social

1. The community needs to be involved as partners. There needs to be a participatory approach that respects the knowledge, expertise, experience and local wisdom of the community or health cadres who are invited to collaborate. The empowerment process will take place more effectively than considering them as the only recipients of the intervention.
2. The term cadre serves as a general term for various lay health workers who are selected and trained to work in the community. There are various names, roles, and scope of work for cadres. They have been prepared as generalist or specialist workers in roles that may be characterized in certain ways—for example, as health promoters, health educators, change agents, or community health managers. There should be more programs producing "formal" cadres with 6-12 months of initial training (accompanied by periodic and integrated refresher trainings), who receive salaries and provide various health interventions that may include curative care as well as preventive and/or promotive services (Dahn, et al., 2015).
3. The main rewards that can strengthen the existence of cadres are pride and self-identity. This can be referred to as social prestige, where they are proud to be considered experts in the health sector compared to the general public.

4. Health worker policies are very rigid. There is no legal regime that regulates the role of social and humanities experts in the health sector as non-health workers who are partners of health workers in PHC services.
5. People with low socioeconomic status tend to have increased morbidity and a life expectancy of less than 70 years. This can affect the utilization of health services, especially primary services. Risk adjustment to the capitation system in primary health care based on socioeconomic factors including age and gender can be a feasible way to achieve equitable access, service utilization and cost efficiency of health services (Zahroh et al., 2018).

5.2 Technology

1. Digital technology intervention in the health sector must be adapted to the region's resources. Groups of regions that already have adequate infrastructure and resources will accept intervention from the center with much more ease than those that are not ready.
2. Electricity and the internet are vital resources for Puskesmas. In Indonesia, there are still approximately 13% of Puskesmas that have access to electricity for less than 24 hours, meaning that there is not always electricity for services. As a result, for example, PCare data input and other technology-based checks are hampered. Processes from health screening to monitoring are also expected to start utilizing digital technology.
3. The Ministry of Communication and Information is preparing a national digital infrastructure, including Google Cloud network. Next year, Microsoft Azure will also be present in Indonesia. Publication articles related to the internet of things or the use of digital technology in various aspects of life are also still lacking in Indonesia and this could be an opportunity, especially in the health sector, to form a research vision that leads to the digitization of health.
4. On February 25, 2021, Microsoft announced the Empower Indonesia Digital Economy initiative, which marks a significant commitment to advancing digital growth and transformation for the country, creating a vibrant ecosystem for developers and startups, enterprises, and the public sector. As part of the plan, Microsoft will build its first data center region in Indonesia to deliver cloud locally, with world-class data security, privacy, and the ability to store data domestically. Microsoft also announced plans to increase the skills of 3 million Indonesians to achieve its goals and empower more than 24 million Indonesians by the end of 2021 through a long-standing skills program designed to create inclusive economic opportunities in the digital age (Microsoft, 2021).
5. With the new data center region, Indonesia will join the world's largest cloud infrastructure with more than 60 existing data center regions to date. Businesses of all sizes and industries will have access to Microsoft Azure when it is launched, enabling anyone to realize goals using cloud services and capabilities that include computing, networking, databases, analytics, artificial intelligence, and the Internet of Things (IoT). Microsoft provides enterprise-grade data security and privacy. With more than 90 compliance certifications, Microsoft meets various industry standards and regulatory entities (Microsoft, 2021).
6. Collaborating with companies that have big data is one of the good synergies for the transformation of primary health care. Health facilities can develop health programs with better innovations because they know the problems they face and the

characteristics/profiles of the community through the data. Centralized data management that is integrated with each other in the future will make it easier for researchers, policy makers and the public to gain insights on the existing health problems and develop them into research/policy recommendations.

7. The pros and cons of telemedicine are still being debated. There is no regulation that is strong enough to switch to telemedicine, namely examinations through photos, video calls and the like. Some of those who are against it refer to Law No. 29 of 2004 on Medical Practice, Article 35, which states that a doctor or dentist who already has a registration certificate has the authority to practice medicine in accordance to their education and competence, which consists of: a. Interviewing patients; b. Examine the patient's physical and mental state; c. Determine the supporting examination; d. Establish a diagnosis; e. Determine the management and treatment of patients. They consider these mandates as not including providing remote health services.

5.3 Economy

1. Inequity is increasing. Unjust or unequal conditions are worsened by the endless pandemic. Various government's efforts have not made any significant impact on or improvement for the slumping economic conditions.
2. The interest of private health facilities to participate in the BPJS scheme is hindered by unfair capitation policies. The participant redistribution policy is also not well designed.
3. Capitation calculations in Indonesia are not based on individual or overall risk calculations. Without adjustments for risk factors, the capitation payment system in primary health care can be either over or underpaid. Whereas in theory capitation is a prospective unit of payment per patient, per month or year, where the payer makes fixed payments for a predetermined set of services, regardless of the quantity of services actually provided (Telykov, 2001). With this payment system, service providers will be aware of the risks and consequences because they perform services beyond what has been agreed upon. Capitation has three important elements: money follows the patient, payment for health services is paid as soon as possible after determining the number of registered patients, and the payee is needed to manage care effectively so that the expenditure is not greater than the payment received (Zahroh et al., 2018)
4. Medical equipment needs have not been fulfilled by the domestic market, forcing large imports to be carried out.

5.4 Environment

1. Climate change has influenced the patterns of some diseases related to their vectors. The changes in environmental impacts also bear influence to infectious and non-transmissible diseases. It also relates to food resilience, which at the end of the day impacts nutrition. Water, air, and land quality meanwhile impacts the cleanliness and sanitation at the household level, which in turn can impact individual health status.
2. Puskesmas may be the center for disaster preparedness and surveillance.
3. Urban environment does not support healthy living

4. The society's healthy behavior must be supported by a friendly urban environment. The availability of pedestrian walks and bicycle lanes are important to be accommodated by the local governments' spatial planning.

5.5 Political

1. Careers in PHC are seen as less attractive, mainly due to the significant difference in the amount of incentives between specialist doctors who work in hospitals and in FKTP. The primary service family medicine specialist (Sp KKLP) is still not attractive for medical faculty students for their career development. In addition to income prospects that are less than other specialists, there are personal passion and preferences and issues with the broad premise of cases in primary health care, which are factors why Sp KKLP has not received a lot of interest.
2. In the realm of health policy, the pandemic is a reminder that it is very important for doctors to play a greater role in the politics of health policy formulation. For example, encouraging the formulation of policies that are more in favor of the health aspect and based on scientific evidence.
3. The increase in the health budget due to the pandemic is not something that has been designed or prepared in advance (by design).
4. The health budget in Indonesia is still far behind that of fuel subsidies and other physical infrastructure. The increase in the budget from 2020 to date has occurred to overcome the existing problems due to the pandemic.
5. Access to health for all Indonesian people must be equal. Equal here means that the level of inequality between regions is shrinking, social mobility is increasing, and the health system is reviewed so that it can be adapted to each region's conditions and context.
6. If a territory has access to health services that are easily accessible by all levels of society, whether rich, poor, rural, urban, on big or small islands, then the area has fair and equitable equity. The distribution of health services, the quantity and quality of services, as well as the distribution of human resources and the distribution of supporting facilities are indicators of equity in health services (Indrayathi & Noviyani, 2017).
7. One of the policy instruments where primary health care may be included in the GBHN (The Outlines of State Development Policy). The discourse this year will be the preparation of the GBHN.
8. Convincing political officials that championing health issues will also increase their electability.

5.6 Values

1. Improving community leadership competencies should focus on participatory decision-making, planning for social change, the planned change process must be understood and implemented widely by the community, and the potential for leadership capabilities expanded to the population. Leadership is one of the keys to successful community empowerment. If the village leadership is caring, honest and sincere, responsible,

trustworthy, and responsive, then the community empowerment program in the health sector will be successful (Lewis et al., 2008; Ife & Tesoriero, 2010; Sulaeman et al., 2012)

2. Health policy should be on the upstream side
3. Almost all of the Ministries' and Institutions' sectors work together to overcome the problems caused by this pandemic, but the signs of the pandemic's direction are only understood by the health workforce.
4. Public health, among others, needs to have the values of equity, social justice, participation, efficiency, effectiveness, acceptability, and accessibility.
5. The government does not believe that the public is capable of maintaining their health. Meanwhile, the private sector does not believe in BPJS Health. BPJS Health and the private sector are both on the same path, namely not trusting the government.

Chapter 6
Scenario Development: Mapping The Possible Future of Primary Health Care

"Anything is possible
if you have got enough nerve"
JK Rowling

6.1. Understanding the plausible *scenarios* in Primary Health Care

The COVID-19 pandemic reveals the central role and need for resilient health services at the community level. Therefore, primary health care which are the backbone of achieving universal health coverage should be considered as part of the post-pandemic development direction (World Bank, 2021).

Currently, PHC is the foundation for: a) ushering Indonesia out of the pandemic through surveillance, testing, contact tracing, vaccination; and b) making up for the losses due to disruptions to the health system through the restoration of essential services. It should be borne in mind that PHC's role is not merely to provide space so that its current function can run, but also to help ensure that the post pandemic primary health care capacity will be able to meet the growing public health needs.

Considering the various uncertainties facing the public health sector, to what extent has Indonesia measured the accuracy of its development direction and PHC involvement remains to be in question. For this reason, future scenarios or narratives can be a guide in considering the best alternative actions for the future of the health system.

Having scenarios helps policy makers and development actors from various sectors see the system's dynamics in a more complex and holistic perspective, acknowledge the existing uncertainties and gaps, and challenge assumptions about what should or should not be done.

Systematically, scenarios are developed with an understanding of trends. Mapping the trends over a certain period will provide an overview of the main factors that act as trend drivers. In order for future scenarios or narratives to be developed, the factors driving the significant trends need to be understood.

There are nine stages of scenario development and analysis. The first step is to determine the

objectives and time horizon scenarios, i.e., the timeframe in which the scenarios are expected to last. The next stage is to determine the main aspects in the social, technological, economic, environmental, and value (STEEPV) fields that will be the focus of the scenario development, especially in terms of the subject ('who') and what might happen. The third stage is to determine the assumptions in each scenario, followed by the fourth stage, which is to develop a framework for the main trends in each scenario. The fifth stage is to write the scenario itself in detail, including the sixth stage, which is the analysis of crisis situations in each scenario. The seventh stage is to develop policy anticipations in each scenario by considering what can and cannot be controlled. The eighth stage is to develop an action strategy based on policy anticipation and finally, evaluate each strategy based on their importance and availability of resources.

In this report, scenario preparation is an integral part of the entire process of exploring the future of PHC, starting from mapping trends that characterize development, identifying major challenges to setting development priorities. This kind of development integration and scenario analysis is important because it involves the results of each methodological phase in foresight. In other contexts, should it be desirable, scenario developments can also be carried out to prepare a roadmap by considering reasonable alternatives in the future.

6.2. Plausible Scenarios

This report scrutinizes the gaps in the government's capacity and commitment in responding to and directing primary health care before and after the pandemic. It observes the health system's resilience, especially in primary care, which is very important for prevention and behavioral change.

The 2020-2024 RPJMN already mentions primary health care. That the direction of the national health development policy is to improve health services towards universal health coverage, by strengthening primary health care. However, compared to other countries, the direction of the PHC development is still not based on systemic change. This is despite the fact that the impact of primary health care transformation is evident for health outcomes, health system efficiency, and health equity.

The STEEPV horizon scanning and dimensional investigation indicated two tug-and-pull factors that determine the direction of the primary health care development: the political economy commitment and the implementation of public health values and principles. These two factors are significantly present in the trend mapping and will be used as the main reference in the scenario development.

6.2.1. Political Economy Axis – Indonesia and Health in All Policies

The Alma Ata Declaration in 2008 promoted PHC reforms in terms of service delivery , health coverage, and health policy. In the case of Indonesia, the transfer of authority from the President to the parliament affects the power relations in determining the direction of health

policy (CISDI, 2020). The challenge facing health reform then hinges on the ability to complement the President's reform commitments with effective planning, implementation, monitoring and evaluation on the ground.

In practice, this commitment and balance is disturbed by the pulls of greater power in determining certain health reforms. Especially when key ministries related to the health sector become political positions and the ministers are mostly recruited from political parties to secure parliamentary support (TEMPO, 2019).

The COVID-19 pandemic has also given rise to the devastating shocks that highlight the inequities and tug-of-war between sectors. In the economic sector, reports from various international institutions indicate an economic contraction that could trigger a global recession (Inman, 2020 in Idil, 2021). Many countries have even announced anticipation measures against recession, for example Singapore and the Philippines (Lim, 2020 in UGM, 2020).

The need to normalize life through the re-functioning of social and economic activities stems from fears of a recession, considering that the pandemic has disrupted the economic movement. The state is entangled in two currents which seem to be pulling towards two opposite directions: political economy versus health. The tug of war between economic and health interests has occurred since the COVID-19 outbreak in Indonesia. This bad practice is reflected in the determination of the policy for the implementation of the Simultaneous Regional Head Elections in 2020 and the Social Restrictions policy which implementation was too late in 2021. The choices tend to be treated as zero-sum, with the perspective that the two interests are at odds with and negates each other (Lin & Meissner, 2020) .

Whereas a capable state should be able to effectively balance a number of basic functions of the government, namely: administrative control, public finances and state assets management, infrastructure reconstruction, and providing access to health care for all citizens. This proficiency can only materialize when "health-in-all policies" is the basis for decision making. "Health in all policies" is based on the recognition that the population's health can be improved through policies driven by sectors outside of health (WHO, 2008a).

6.2.2. Axis of Values - Understanding the Functions of Public Health

From the mapping it is evident that the pull from the demand and investment side is still centered on hospitals. From a policy perspective, for some time the health system has been developed with a focus around hospitals and specialties. Hospitals, with their technologies and sub-specialties, have acquired an important role in most health systems around the world (WHO, 2008a). Hospitals are seen as the standard health care providers that are more capable of providing quality and efficiency for patients compared to basic health services.

In fact, the disproportionate focus on hospitals and subspecialties has become a major source of inefficiency and inequality which has proven to have a negative impact in health

emergencies such as in July-August 2021. From a public health perspective, the function of an ideal primary health care is better able to boost the fulfillment of health needs.

Evidence from countries with well-established health systems collected by Universitas Gadjah Mada in 2020 shows that 20% of 1000 people per month can estimate the need for drugs or services at primary polyclinics, but not even 50% (100 people) need to buy simple medicine to reduce symptoms. Only about 55 people require hospitalization and a maximum of 10 people (1%) require hospitalization. Based on these calculations, if primary prevention efforts run well, the burden of service in hospitals will decrease significantly (UGM, 2020).

The case example shows the tug of war between public demand and policy and the consideration of values has also become a determinant for the direction of health services' development.

This study develops four scenarios to provide an approach and policy direction for primary health care development. The scenario development is carried out through a deductive exploratory method using data on the current situation (drivers, trends, challenges). Each scenario has its own characteristics and the same probability of occurring in 2024.

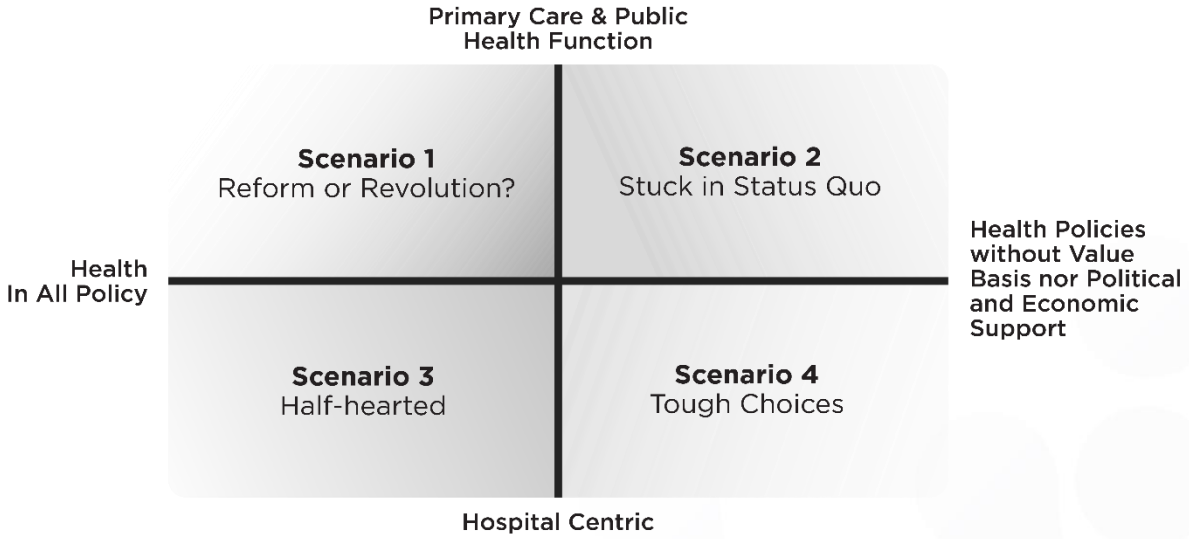


Chart 12. PHC Foresight Scenario Quadrants

Scenario 1: Reform or Revolution?

This scenario looks at the direction of the Indonesian health system's development in the next few years from the perspective of an optimist. The developments that occur are believed to lead to improvements towards an ideal world, with the main condition being that structural improvements are carried out.

The lessons learned during the pandemic put Indonesia in the right position to carry out comprehensive reforms in primary health care. This scenario optimistically sees the

momentum of the leadership change in 2024 as bringing fresh air and good and bad practices during the pandemic will be sorted out, with good subsequently implemented to promote health in all policies.

The main characteristic of this scenario is that it places structural changes as a way of changing perspectives. Thus, the investment perspective has begun to focus on seeing health as a long-term investment, not as a short-term cost burden.

The availability of a solid regulatory framework is one of the benchmarks for the resilience of the national health system. Currently, the available regulatory framework (Presidential Regulation No. 72 of 2012) does not guarantee that the health system is available at the local level. If the regulatory framework is made into law, this opens up opportunities for legislation at the regional level to ensure the existence of Regional Health Systems. The availability of the national health system (*Sistem Kesehatan Nasional*-Siskesnas) and regional health systems (*Sistem Kesehatan Daerah*-Siskesda) is a clear example of the synergy between the central and regional governments in determining the direction and priorities of health development (CISDI, 2020).

Just as shoots need a balance of water, sunlight, minerals or fertilizers as the main factor in their robust growth, a good health system reform needs to be fostered by balanced health, economic, political and social policies. A leadership that is oriented towards improving the system and prioritizing accountability is key to the government's capacity to be able to comprehend the urgency of investment in strengthening essential elements of primary health care from the evaluation results during the pandemic.

One of the characteristics of this scenario is reflected in its governance. The government has drastically started implementing the merit system to arrange consequence-based governance management. From a national health policy perspective, this means managing the interaction between the political wing in the Presidential Secretariat Office and the technocratic under the coordination of the Coordinating Ministry for Human Development and Culture.

The formulation of health reform prioritizes investment in strong primary health care so as to enable the health system to side with the needs of patients (patient-centered care). Therefore, in this scenario health services can be more effective in utilizing resources, as well as able to increase public health literacy because of their active participation in their own care.

With the high level of public participation in creating demand and overseeing the current health system, Indonesia's position can also shift to this scenario if there is a mechanism for the adoption of public participation into the government system, especially in policy making and development implementation. Voices from the community can be managed and controlled to compensate for the shortcomings that arise as a result of existing health policies. Community

participation is directed in such a way that it can be accommodated properly and does not become destructive or create precedents that disrupt political stability.

However, the rapidly growing public demand for a health system during the COVID-19 pandemic has also opened up a scenario for a health system revolution.

"Reform or Revolution"-- two ways to the ideal world we desire. Which path should Indonesia take?

Scenario 2: Trapped in the "Status Quo"

In general, this scenario describes the current state of Indonesia for the next five years without significant structural changes. Where the tug of war continues between saving the country by fulfilling the health system or through economic improvement. This condition is reflected during the COVID-19 pandemic and the policy inconsistencies between ministries, institutions and sub-national levels.

In 2023, bureaucratic capacity will be significantly affected by the dynamics of the five-year political routine. If the structural improvement in handling the pandemic is resolved at the latest in the final trimester of 2022; then the COVID-19 response will be trapped as a political matter that is debated, used solely for beauty contests, and become the target of the civil society's anger, without actual merit to save lives.

Changes in the budget structure within the technical ministries are not complemented by significant changes in the overall posture of the health budget and seem to be without clear priorities set towards the transformation of primary health care.

Investments in Puskesmas are in the form of providing quality health resources, availability of essential tools and medicines, information systems, and budgets for both curative and preventive programs. The growth of Puskesmas in the last 5 years only reached 4.5% from 9,767 Puskesmas in 2016 to 10,203 in 2020. Meanwhile, in the same period, hospitals grew by 19.7% from 2,045 to 2449 (Ministry of Health, 2021a).

From a general development perspective, policy makers often take steps that hurt public feelings. Various examples, from the enactment of the Employment Creation Law to the recent State Capital Law, show the failure of development policy makers to side with public health restoration.

Entering the third year of the pandemic, people are not given hope of a new life that can save their lives. Based on the situation during the pandemic, this scenario also illustrates that under the "status quo" conditions, policies outside the health sector that are very influential in achieving development targets will rely more on short-term economic profit/loss calculations.

Scenario 3: Half-Hearted

The scenarios illustrate how difficult it is to change and transform. Especially in this "Half-hearted" scenario, the pull between doing "Business as Usual" and making "Tough Choices" makes this scenario very likely to happen. The dynamics of external elements to the bureaucracy, especially public pressure, can make changes seem to move towards the ideal scenario. However, because change is still reactive without a long-term oriented systemic approach, the change stalls halfway before transformation actually takes place.

The main characteristic of this scenario is the failure to complete a program's implementation, starting from making the policy that gave birth to it to the activities that follow. Moreover, the movement for the policy implementation seems only to be limited to the state apparatus; it does not reach the wider public. From the health service delivery point of view, although it appears that there are measures taken towards health in all policies, hospital centrism remains to be more dominant than educational and preventive efforts that are carried out systematically at PHC. In the end, health in all policies just stops at being a slogan/rhetoric and is never really materialized.

This situation is but a repeat of the pre-pandemic records, where the cost of curative spending reached 69.1 percent (Rp 317.6 trillion) of the total health expenditure. Meanwhile, the expenditure for preventive service functions was 14.3 percent (Rp 65.7 trillion), and for health administration governance functions was even lower at only 3.9 percent (Rp17.8 trillion).

The low share of capital expenditure is also evident; with only 7.4 percent (Rp33.8 trillion) for capital expenditures on medical devices and other support, spending for education and training for health human resources, as well as health research. The low investment in preventive measures and the development of supporting ecosystems (human resources, innovation and research) does not seem to be in line with the policy direction of the 2020-2024 RPJMN. If this half-hearted state of change continues, Indonesia's health system's status quo will shift to this scenario.

Scenario 4: Tough Choices

In this scenario, the tug of war between economic and political interests dominates the policy makers' choices. Health care has become like the new Titanic of the modern era, an analogy that has long been a benchmark for America's healthcare system. The development of Indonesia's health system is very likely to shift to this scenario if the principle of equality and attention to inequalities that still exist here and there is slow to be addressed.

Characteristically, this scenario describes a condition where due to weak value-based regulations that balance the intensifying pull and tug between interests and public health needs, service commercialization models, and products with health risks.

If so, this scenario exists when the development focus returns to hospital-centrism. The health system is seen as a means to maximize profits, so hospitals with a more systematic profit withdrawal system are rapidly built. At the local government level, hospitals are used as a source of regional income.

Economic and political policies that do not apply a health perspective weaken preventive regulations. While the State struggles to find ways to cover the costs of treating diabetes, obesity and other non-communicable diseases, subsidy payments and compromises for the food industry's health risks remain unobstructed.

At the community level, products with health risks are freely circulated and marketed, even to the younger generation. Prioritizing innovation and conforming to trends for additional income for the state or company, these products are sold freely at affordable prices. While the products that are good to consume do not receive the support to ensure that their prices are more affordable. Maintaining high consumption of products that pose health risks and combining it with a health system whose investment is focused on curative measures is as if we pay to create health problems, and then we must pay more to treat them.

The push for telemedicine and various startups in the health sector is getting stronger, but it is not accompanied by strengthening the literacy of communities whose access to technology is precarious. So, some groups still do not have access to health services or monitoring that are more affordable in terms of distance and cost. Thus, once again health becomes a luxury.

The Titanic is a lesson learnt, as the luxury yacht was equipped with various luxury amenities, justifying the $4,350 ticket price that promised first-class travel quality. Despite being a tempting choice, unfortunately, the luxury was not complemented with adequate infrastructure to face terrain ahead nor a crew with the capacity to predict and evacuate passengers during emergency conditions.

Similar to the Titanic, this scenario describes the conditions under which the government and parliament issue policies that turn health care into a luxury, without considering the readiness to fend off icebergs that lie ahead, such as pandemics or other health emergencies in the future.

Table 8. Matrix of Plausible Scenarios Leveraging

PHC	Scenario 1 Reform / Revolution	Scenario 2 Trapped in the Status Quo	Scenario 3 Half-Hearted	Scenario 4 Tough Choices
Political commitment and leadership	Health reform formulation must place primary health care at the forefront of a diagonal approach to national health reform There exists political commitment related to the design of a sustainable financing framework to produce superior health human resources who are the guardians of public health that must be implemented by the central and local governments.	Strengthening Primary Health Care has been stated in the Presidential Regulation, Strategic Plan, and RPJMN but has not been seen as a long-term investment	Health in All Policy is implemented but focused on the development and transformation of hospital services (hospital-centric) Minimal investment in system-based change, responsive to certain events	Health System Reform is not working because of the strong political pull for the economy. Policy makers vacillate between profitable development investment options with short-term impacts, or vice versa.
Governance and policy frameworks	Alignment between reform commitments at the President level with effective performance planning, implementation, monitoring and evaluation on the ground Scenario by viewing health as an investment, not a cost. So that political and economic support also leads to it, there is no tug of war There is institutional reorganization of the stakeholders at the central level, consideration to expand the role of Bappenas which has the strength in technocratic approach and has a formal consultation mechanism	There is a constant tug of war when it comes to investing in public health functions and the economic costs as well as political pressures. Ministries can operate according to their respective agendas and are not obliged to carry out the President's general vision at the national level The discontinuity continues between the reformist statements at the Presidential and Ministerial levels and the reality at lower levels of the government.	The main function of the province as a representative of the central government (intermediate government) is often lost in the construction of regional development governance. The bill initiated by the House of Representatives to abolish the role of doctors in primary health care was passed.	Policies related to social, economic, commercial, and environmental determinants that affect the achievement of health targets such as cigarette excise, FCTC accession, and controlling the consumption of salt and sugar are increasingly supportive towards the industries

PHC	Scenario 1 Reform / Revolution	Scenario 2 Trapped in the Status Quo	Scenario 3 Half-Hearted	Scenario 4 Tough Choices
	tiered from the village to the central government. The legislature and executive draft a National Health System Law that outlines priorities and ongoing budget commitments for Primary Health Care.	The Health Legislation Program for the issuance of the National Guidelines for Medical Practice and the clinical pathway progresses slowly.		

PHC Levers	Scenario 1 Reform / Revolution	Scenario 2 Stuck in the Status Quo	Scenario 3 Half	Scenario 4 Difficult Choices
Funding and allocation of resources	Focusing on long-term health investment: transformation of primary health care Health expenditure allocation specifically for primary healthcare increases drastically, closer to the WHO recommended rate of 1% of GDP The government shifts the Puskesmas financing model of Puskesmas from supply-side to performance-based financing	The public health budget scheme in the Ministry of Health does not show priority in primary health care transformation Sub-national: The distribution of BOK through non-physical DAK mechanisms makes the realization time often late and depends on the regional budget mechanisms (Bappenas, 2019)	Changes in the budget structure within technical ministries are not accompanied by significant changes in the overall health budget posture and are seen without clear priorities on the transformation of primary health care Investment in state spending is increasingly focused on curative, with minimum investment in preventive and research in the health sector.	The budget for primary health care expenditure is stagnant, budget priorities are focused on hospital development
Engagement of communities and other stakeholders	involvement Sustained cadre involvement no longer depends on changes in regional leadership The transformation of cadres into an integrated part of the Health Resources system, has a regulatory and incentive umbrella. There is compliance for the expansion of the definition of vulnerable groups in the operational definition of the program so that the reach is wider for groups that really need	a healthy paradigm as a health development paradigm that has been formulated, but has not been understood and applied by all parties. Outreach to vulnerable groups is ongoing, but limited to a few categories regardless of the expansion of vulnerabilities that occurred during the pandemic.	Multi-stakeholder partnership platforms are still a formality and have not increased meaningful participation, especially for civil society. Community engagement is tokenistic, the community is involved with minimum investment and without consideration of performance-based remuneration.	Utilization of community volunteers, no investment for integration of cadres/communities in the health workforce

PHC Levers	Scenario 1 Reform / Revolution	Scenario 2 Stuck in the Status Quo	Scenario 3 Half	Scenario 4 Difficult Choices
Models of care	The functions of SMEs and UKPs go hand in hand towards health services comprehensive and integrated	At the district/city level, the obligation to establish Minimum Service Standards (MSS) in a number of health service packages and the requirement to refer to the Norms, Standards, Procedures and Criteria (NSPK) in implementation are still ignored	Exclusion of promotive and preventive aspects in therapeutic relationships (UKP), mainly due to the reduced investment in the role of doctors in FKTP	
Primary health care workforce	An inclusive institutional mechanism that coordinates a cross-sectoral health workforce agenda and tracks availability, distribution, capacity, and wage levels. There is an initiation of collaboration with universities for the development and study of the health workforce education curriculum Increased investment for in-service training with e-learning and setting performance-based compensation standards Health faculties also started to build not only teaching hospitals but also primary education clinics.	The competence of health workers to respond correctly to questions in the form of procedural vignettes for medical procedures did not increase significantly . The supply of health workers is high, but distribution and quality distribution are still a challenge. The quality of health workers has not been standardized. The results of the 2015-2017 competency tests for doctors, dentists, midwives, and nurses did not reach more than 80% of the required scores.	Again, there was a massive supply of health workers without improvements in the quality of education, selection, and pre-service training.	The supply of good quality health workers, focused on the placement of hospitals and large urban areas due to noncompetitive remuneration investments.

Chapter 7
What to Say and How to Say It? Policy Recommendation and Scenario Operationalization

"There is a perception that the emergency conditions have passed,
because we're now in the reconstruction phase.
This is wrong.
The problems are so great,
the humanitarian needs are so immense,
that the emergency continues."
Kuntoro Mangkusubroto,
on reconstructing Aceh after the tsunami

This study started with the idea that the realization of PHC's had been delayed for too long and that a different approach had to be taken immediately so that the real transformation could be achieved. The occurrence of the COVID-19 pandemic, the massive damage it caused and the absence of any other choice but to rebuild, can actually be used as a trigger for the overall improvement of the national health system.

From the various scientific publications referred to in this study, the research team realized that the failure to deliver PHC occurred not only in Indonesia, but also in several other countries. However, countries in Latin America, which, like Indonesia, are in the low to middle income countries group, have started to improve systems-based health policies and consistently carry out their commitment to prioritize PHC. Hearing and capturing public perceptions is one of the most important parts of structuring the future of PHC policies. This has been proven through studies comparing public perceptions on the health system. Studies conducted in several Latin American countries show that 85% of the population demand fundamental changes to occur in the health system. (Pérez-Cuevas et al, 2017).

From the developed countries group, the research team observed that the approach framework adopted by Canada could be adapted by Indonesia (Patient's Medical Home, The College of Family Physicians Canada, 2019). The integrative approach as adopted by Canada is in line with the recommendations in the WHO and UNICEF's Primary Health Care Theory of Change which the research team uses as the main reference for this study. With its diverse demographics, Indonesia has not experienced a significant improvement in health status –

even in areas where access to health services is not a problem. So, what policy directions are needed so that the PHC transformation is carried out properly and can be operationalized both nationally and by each local government?

The four scenarios in chapter 6 explain why tensions between elements outside of health affect policies that occur in the health sector. The research team's analysis, based on events, trends, drivers and expert inputs that have been mapped as structural challenges, reached the conclusion that the current health policy situation in Indonesia, particularly the PHC, is in scenario 2: "Trapped in the Status Quo". According to the characteristics in the scenario, the priority on PHC transformation is not/has not become a health development priority at the national or sub-national level. The regulatory framework could still be supplemented by stronger regulations in the form of laws at the national level which then are translated into lower regulations at the sub-national level. There is no (as yet) health policies' adoption and adaptation in institutions or ministries outside of health. Fragmentation of data and data collection systems, insufficient quality of health workers, low utilization of digital technology for health, and lack of community involvement in public health efforts; all complete the characteristics of Indonesia's current PHC situation.

The ideal scenario for Indonesia based on various pieces of evidence, the horizon scanning of public conversation about the health system, and of course inputs from experts is scenario 1: "Reform or Revolution?". The changes in policy direction as well as the political and budgetary commitments that must occur in order for this scenario to happen are quite fundamental. In order to operationalize this scenario, the research team mapped the recommendations back to the Primary Health Care Theory of Change, but still following the logic of policy direction – identification of processes – identification of key indicators. This approach is taken so that the scenario can be operationalized immediately. Operationalization of the scenario requires a theory of change that is able to be implemented by the bureaucratic structure, considering that an agile bureaucracy is as important as an actively involved society. In addition, considering the decentralized nature of the government in accordance with the Regional Autonomy Law, the recommendations given are only truly operational if they can be implemented by the central government or directly adopted/implemented by the local governments. Minimum Service Standards (MSS) and regulations that bind them have been prepared as benchmarks for the success of achieving development targets at the sub-national level. Therefore, the operationalization of the ideal scenario includes the implementation of MSS.

The Elements of PHC Reform

In order for the ideal scenario to work, fundamental reforms must be carried out by targeting five main areas, namely: (1) leadership and governance; (2) public policy; (3) service quality; (4) health insurance; and (5) health workforce, including health cadres.

First, a strong, adequate and effective policy framework is needed to reach the government at the central and regional levels. The research team used Thailand as the benchmark for this

regulatory framework because it has incorporated PHC into the constitution or the Basic Law. Meanwhile, until now the Indonesian health system is still regulated by Presidential Regulation no. 72 of 2012. Higher/binding regulations such as laws are needed, considering that reforming the national health system and transforming PHC takes a long time and requires budget commitments. Concrete budget allocations at the national and subnational levels are needed to ensure implementation. The policy framework governing the relationship needs to be strengthened so that accountability of the health sector at all levels and between levels of governments can occur. Interventions to improve accountability are not limited to the financial audit function but also to performance monitoring.

Second, in terms of public policies' quality, there needs to be policy reform on social, economic, commercial and environmental determinants related to the health sector. Some examples of policy reforms that have continuously been delayed but are really needed include increased cigarette excise, the ratification of the Framework Convention on Tobacco Control (FCTC), and sugar and fat consumption control. In the context of a pandemic, it is understandable if there are competing priorities in determining which policies must be implemented first, while the threat of a recession lurks. However, to structure the future, the government should not hesitate to put health as a priority in all its policies. This priority placement on health can be seen from the examples of other countries since before the pandemic hit.

Third, reforming the service model requires policies to: (a) integrate public and private services so that 100% of the population can be reached by primary health facilities; (b) integration between public health functions and primary care; (c) improvement of the accreditation system for primary level health facilities that can objectively ensure the quality of services provided, and (d) integration between supply-side and demand-side financing.

Fourth, in health insurance reform, it must be understood that the notion of Universal Health Coverage is not limited to the number of participants, but also includes comprehensive and quality health service coverage without compromising financial conditions. Reform in this fourth aspect includes participant redistribution so that it is not concentrated only in Puskesmas. In addition, it is necessary to ensure strategic purchasing, especially in relation to capitation, accreditation especially related to credentialing; and development of clinical pathways.

Fifth, under ideal conditions, health workforce' reform includes not only health workers but also health cadres. However, ensuring the execution at the primary health care level must be preceded by some fundamental steps, which include the determination of competency standards for non-health workers according to the needs of the population and deciding the types of training needed. In the literature study of various scientific publications conducted by the research team, it is clear that the similarities between countries that have strong PHC systems lie in how empowered their health cadres are. This is because the health cadres are given an accommodative institutional platform to support capacity building and treated as health professionals. Especially for doctors working in PHC, various good practices and

evidence from many other countries have shown that within 15-20 years the standards of the Primary Care doctors working in PHC can be equal to those of specialist doctors. In Indonesia, this has actually been regulated in the Medical Education Law, namely primary care family medicine specialists (Sp KKLP), and doctors can achieve it through a Recognized Prior Learning or through regular programs.

Success Indicators for PHC transformation

The success of the PHC transformation can be measured by the indicators offered by the WHO Primary Health Care Theory of Change (WHO & UNICEF, 2020). This theory framework divides the operationalization of health policies with priority on PHC transformation into two major parts, namely strategic and operational levers as described in Chapter 4. Looking at the existing structural challenges and ideal scenarios that can be worked out if the future of primary health care in Indonesia is organized today; the research team suggests several strategic indicators that can be used to measure the success of PHC transformation.

For strategic levers, there are three indicators, namely: (1) political commitment and policy direction; (2) budget commitments; and (3) public involvement. Meanwhile, for operational leverage, three indicators that measure the success of operationalizing the ideal scenario are: (1) the use of big data and digital health; (2) development of PHC-oriented research; (3) development of quality health workforce with PHC as the priority.

Strategic Levers

The transformation of political commitment and policy direction must start from a change of perspective. PHC transformation is a long-term investment. Therefore, policy alignment is needed from the National Medium-Term Development Plan (RPJMN) to the Ministry's Strategic Plan and Activity Plan and Budget.

In the budget commitment, we know that the APBN allocation for PHC is 0.05% of GDP. Meanwhile, based on WHO recommendations, a budget allocation of 1% of GDP is needed for the PHC transformation to be successful. What should be underlined here is to operationalize the ideal scenario in which health across all policies *is* achieved, it does not necessarily mean that the required amount must be set aside in the budget immediately. First, it must be ensured that the transformations are appropriate and target the required transformation elements. Only with such precision can future arrangements be actually made. Meanwhile, at the sub-national level, the local governments' dependence on the central government is one of the most issues to be reorganized. This dependence is contrary to the nature of decentralization where local governments are able to independently determine budget commitments, including for the health sector. At the health service level, a redistribution of capitation is needed between Puskesmas and private clinics as well as a shift in perspective so that the private sector also sees PHC as an investment and gets attractive incentives to participate in developing it.

The PHC transformation will not succeed without the active support of the community. The integration of the measures to combine qualified health workers with active community health cadres into a unit called health workforce or health workforce is the key in structuring the future of PHC. The placement of health workers in the form of teams as well as the integration and institutionalization of health cadres in carrying out activities at PHC are the cornerstones in structuring the future of PHC. In addition, the involvement of civil society is increasingly becoming a determining factor for success. The pandemic has taught us that, assuming the policy direction is right, then the implementation of these policies requires other development actors outside the government. Civil society in the form of organizations and groups at the national, sub-national and even community levels is needed to ensure that a policy is not only properly understood but also implemented at the community level. Structuring the future of PHC includes restructuring the strategic position of civil society as policy advocates at the national and sub-national levels and as community advocates.

Operational Levers

This indicator is cross-cutting; such as the use of data for policy making as well as determining the financing allocation and accountability.

As operational levers, indicators on big data and digital health use in the PHC transformation, especially in an era that has experienced pandemic disruption, are a necessity. One obvious example is pandemic data crowdsourcing at the community level. Tele-diagnostics have also been "forced" by the pandemic to develop rapidly and be widely used. Digital health technology is also used to ensure supply chain logistics including for vaccine distribution, to track health facilities' readiness and management and to do referrals between service levels in the health system. The pandemic as a wild card has succeeded in disturbing and forcing changes to occur in digital data and technology; the future arrangement needed at this time is to encourage true transformation to occur through a policy that can be implemented by national and sub-national governments.

The transformation of PHC requires extensive research and support and the development of a body of knowledge that significantly exceeds what is currently available. Until now, at least in Indonesia, PHC and research on health systems have not become areas of great interest for researchers. From the technology, human resource capacity development as well as service quality improvement point of view, PHC research in Indonesia has not shown any significant progress. Meanwhile, the research on the use of technology through social network analysis in the health system has been carried out since at least a decade ago (Blanchet & James, 2012). Organizing the future of PHC in Indonesia starts with conducting research and continuously collecting evidence so that the right policy direction and budget investment commitments are placed in the appropriate allocation.

At the strategic and operational levels, the strategic role of qualified health workforce is an indicator of the success of the ideal scenario that has a balance between Primary Care and Public Health Functions. The role of universities in structuring the future of PHC, specifically for

the transformation of health workforce, is actually very strategic. Reflecting Thailand's experience, the transformation of PHC which relies on universities targets three areas, namely: (1) developing a curriculum for health workers; (2) conducting studies as a basis for advocacy at the health departments; and (3) researching or evaluating program implementation. In Indonesia, there is already an available platform, namely the Joint Committee of the Ministry of Education, Culture and Technology Research and the Ministry of Health is essentially the integration between education and health. However, in the context of future arrangements, this committee must get buy-in from a wider Academic Health System so that its developments and innovations are not only appropriate but also accommodates innovations that have actually been inherent in the system. Through this system, it is hoped that there will be an increase in the number, quality and distribution of health workers.

Chapter 8
What Needs to be Realized? Closing

The woods are lovely, dark and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep
Robert Frost

The realization of the PHC transformation has been delayed for too long. Horizon scans show that public conversation about primary health care is minimal and lacks policy depth. The horizon of public discourse seems to be trapped only at the operational level and PHC is trapped in the policy makers' rhetoric and its implementation always fails to materialize in a way that improves the health status of the community.

This study provides comprehensive recommendations on the appropriate state policy direction and measures and budget investments for a genuine transformation. A review of the interrelationships with elements outside the health sector that influence the direction of health policy is accommodated in the ideal scenario. In addition to policy directions, answers to deadlocks in operationalization have also been given. It is important to remember that the scenarios chart both the possible future and deviations. This is expected to provide a complete picture for policy makers and other development actors as a reminder that development policy planning has multiple factors in it. Discursive or changes in one aspect will affect other elements.

Social innovation is one of the enabling factors for the ideal scenario, as this study finds. Governance reform in health policy and PHC transformation does not mean that the government completely relinquishes command and control. However, it also does not mean that the wider public can be placed or position themselves only as spectators. The dynamics and healthy dialogue between policy makers and the public is an absolute requirement for managing the future of Indonesia's primary health care.

Appendices

Appendix 1. Policy Framework for Primary Health Care in Indonesia

Type of Regulation	Description
of Law	Law no. 36 of 2009 on Health Law on National Social Security System
Presidential	Regulation No. 72 of 2012 on the National Health System Presidential Decree No. 64 of 2020 on JKN
Minister of Health Regulation	• Minister of Health Regulation No. 43 of 2019 on Health Centers • Minister of Health Regulation No. 4 of 2019 on Technical Standards for Fulfilling Basic Service Quality on Minimum Service Standards in the Health Sector • Minister of Health Regulation No. 27 of 2019 on Accreditation • Minister of Health Regulation No. 7 of 2021 on Health Services during the JKN Period • Minister of Health Regulation No. 4 of 2017 on the Standard Tariff • Minister Health No. 31 of 2019 on Health Center Information System • Minister of Health Regulation No. 33 of 2018 on the Special Assignment of Health Workers in Supporting the *Nusantara Sehat* Program • Minister of Health Regulation No. 9 of 2014 on Clinics • Minister of Health Regulation No. 43 of 2019 on Public Health Centers • Minister of Health Regulation No. 83 of 2014 on UTD, BDRS and Regional Service Networks • Minister of Health Regulation No. 91 of 2015 on Standards for Blood Transfusion Services • Minister of Health Regulation No. 92 of 2015 on Technical Guidelines for the Implementation of Cooperation Programs between Puskesmas, Blood Transfusion Units and Hospitals in Blood Services to Reduce Maternal Mortality • Minister of Health Regulation no. 39 of 2016 on Guidelines for the Implementation of a Healthy Indonesia Program with a Family Approach
	• Health Regulation No. 43 of 2016 on Minimum Service Standards in the Health Sector • Minister of Health Regulation No. 28 of 2017 on Permits and Implementation of Independent Midwife Practice, and • Health Regulation No. 35 of 2019 on Educational Facilities in the Health Sector
Minister of Health Decree	Minister of Health Regulation No./MENKES/514/2015 on Guidelines for Clinical Practice for Doctors in the First Level Health Service Facilities

Appendix 2: Puskesmas Program based on The Minister of Health Regulation No. 43 of 2019 on Puskesmas

I. Public Health Measures (UKM)

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
1.	**Essential UKM**				
a.	**Health promotion services**	Counseling, education and counseling	Health promotion in primary education schools		
			Promotion of community empowerment in the health sector		
			Community mental health education and drugs		
			Mental health education for pregnant and breastfeeding mothers		
			Community mental health and drugs education in at-risk populations (elderly, children and adolescents)		
			Group or community education on personal hygiene behavior		
			Dental and Oral Health education for pregnant women, children under five, children, adolescents, adults, the elderly (life cycle approach)		
			Promotion of Health and nutrition for pregnant women, maternity, postpartum and family planning		
			Promotion of health, nutrition, growth and development of under-five and early childhood		
			Promotion of health and nutrition for school-age children and adolescents		
			Promotion of health and nutrition for those in reproductive age		
			Promotion of health and nutrition for the elderly		

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
			Health promotion in the workplace		
			Education to increase public awareness on Immunization		
			Reproductive health counseling for adolescent groups		
			Increasing the community's comprehensive knowledge on preventing HIV-AIDS and STI transmission		
			Increasing public knowledge and awareness on diarrheal diseases, typhoid and hepatitis		
			Education and counseling on Infant and Child Feeding (PMBA) including breastfeeding and complementary feeding for healthy children under five, undernourished children under 5, and malnourished outpatient children under five		
			Education and counseling on diet, eating behavior and physical activity for school-age children		
			Education and counseling on eating patterns, eating behavior for KEK/underweight pregnant women		
			Dietetic counseling		
			Education and counseling on eating patterns, eating behavior for KEK/underweight pregnant women		
			Education and Counseling activities on Self-medication and Drug Use		
		Empowerment	Motivating community figures in appointing health cadres or establishing groups that care about health		
			Forming networks in the establishment of PHBS in the community		
			Mobilizing community groups in the use of UKBM		
			Community Empowerment Activities to Increase Rational Drug Use through the Active Person Learning Method (CBIA)		

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
			Forming elderly groups as a forum for creating, socializing, gaining knowledge and at the same time maintaining the independence of the elderly		
		Training of cadres	Training of health cadres on self-care and practicing clean and healthy life behavior (PHBS)		
			Training of health cadres in conveying information to groups or communities about self-care and practicing PHBS in the target areas		
			Train Cadres on Self-Medication and Drug Use through the Active Person Learning Method (CBIA)		
		Advocacy	Advocating the community and across sectors related to the practice of PHBS and managing certain health problems.		
			Advocacy of community leaders in forming self-help groups related to the treatment of nutritional problems		
b.	**Environmental Health Services**	Counseling Services	Conduct environmental health counseling/consultation to patients who suffer from diseases/health problems caused by environmental risk factors that are carried out in an integrated manner with treatment and or care services and people who have environmental health problems in the household/surrounding environment		
		Environmental Health Inspection	Conduct environmental health inspections as a follow-up to counseling by conducting: 1) Physical observation of environmental media 2) On-site environmental media measurements 3) Laboratory tests 4) Environmental Health risk analysis 5) Conducting guidance and supervision of environmental health quality on Settlements, workplaces, public places (schools, markets, places of worship, etc.), and tourist attractions		
		Environmental Health	Conduct environmental health interventions related to follow-up counseling and environmental health problems in the community. Environmental health interventions in the		

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
		Interventions	form of: IEC and Empowerment, Improvement and construction of facilities, Development of Appropriate technology and Environmental Engineering		
		Community Empowerment	Triggering the 5 pillars of STBM Community assistance to improve the quality of environmental health and its management		
		Capacity building	Capacity building for officers, communities, cadres, other related parties		
c.	**Family health services**	Maternal and newborn Health	1) Posyandu 2) Education on danger signs in pregnancy, childbirth and the postpartum 3) Assistance in the use of the MCH Handbook 4) Mother's class		1) Posyandu 2) Education on danger signs in pregnancy, childbirth and the postpartum
		Under Five Health Services	1) Monitoring growth and development 2) Basic and advanced immunization services 3) Vitamin A 4) Assistance in the use of MCH Handbook (Class for the Mothers of Under Five Year Olds') 5) Integrated Management of Sick Under Five Year Olds		Growth and development monitoring 2) Basic and advanced immunization services 3) Vitamin A 4) Assistance in the use of the MCH Handbook (Class for the Mothers of Under Five Year Old') 5) Integrated Management of Sick Toddlers 6) Community-Based Integrated Management of Sick Under Five Year Old
		School-Based Health Measures {UKS}	Health screening of students in primary education		
		Health Services for Prospective Brides	IEC (Information, Education ad Communication) and health checks for prospective brides and grooms		

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
		and Grooms			
		Family planning Services	Family planning education according to government programs for the reproductive age group or community		
		Health services for the elderly	1) Elderly Posyandu 2) Home care services 3) Long term care service		
d.	**Nutrition Services**	Early detection	Perform early detection/discovery of nutritional cases in the community		
			Nutrition Surveillance		
		Services	Provide nursing care for nutritional cases in groups or communities		
		Monitoring the Growth and Nutritional Status of Children under Five	Nutritional care for under-five year olds who are underweight, undernourished and malnourished, stunted and very stunted under-fives, and overweight and obese under-fives		
			Nutritional Care for overweight and obese school children and adolescents		
			Nutritional care for anemic adolescent girls		
			Nutritional care for undernourished adults		
			Nutritional care for adults with excess nutrition		
			Nutritional care pregnant women with chronic energy deficiency		
			Nutritional care for anemic pregnant women		

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
			Nutritional care for the elderly		
		Counseling for Infants and Children Feeding (PMBA)	Nutritional care to increase the coverage of IMD		
			Nutritional care to increase the coverage of exclusive breastfeeding		
			Nutritional care to increase the provision of complementary feeding since the age of 6 months		
			Nutritional care to increase the coverage of breastfeeding until the age of two years old		
		Nutritional Supplement	Nutritional care to improve the coverage of Vitamin A provision		
			Nutritional care to increase the coverage of giving iron tablets to female adolescents, pregnant women and reproductive age women		
			Nutritional care to increase the coverage of recovery supplementary food for under five year olds, pregnant women, and school-age children		
e.	**Disease prevention and control services**	Non-communicable disease prevention and control of	1) PTM Posbindu (Integrated Guidance Post for Non-Communicable Disease) 2) Integrated Non Communicable Disease Services 3) Early detection of breast and cervical cancer 4) Efforts to stop smoking 5) Prevention and control of sensory disorders 6) Mental health services		
		Communicable disease	Prevention and control of Filariasis*		

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
		prevention and control			
			Prevention and control of Worms		
			Prevention and control of Dengue/DHF infection*		
			Prevention and Control of Malaria*		
			Prevention and Control of Zoonoses*		
			Prevention and Control of HIV/AIDS*		
			Prevention and Control of Sexually Transmitted Infections		
			Prevention and Control of Tuberculosis		Control of Tuberculosis
			Prevention and Control of Diseases that can be Prevented by Immunization		
2. UKM Development**					
a.	**Public Dental Health Measures**	Public Dental Health Services	Community Dental Health Services for pregnant women, under five year olds, early childhood, the elderly		
b.	**Integrated complementary traditional health services**		Utilization of Family Medicinal Plants (TOGA) and skills		
c.	**Occupational health and sports**	Early Detection	Education Post for Occupational Health Measures (UKK)		

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
		Monitoring of work environment health and ergonomics in the workplace	Conducting monitoring and assessment of industrial, office, work environment and ergonomic health risks in workplaces, health facilities, informal work sites and making risk maps		
			Conduct environmental education and monitoring		
		Environmental control and intervention.	Work and workplace ergonomics, making recommendations to control work environment risks		
			Conduct work environment interventions: IEC, empowerment, work environment improvements, environmental engineering and use of appropriate technology.		
			Increased knowledge on healthy, safe and ergonomic working methods		

Remarks:

1. The matrices mentioned above are some examples of activities carried out by Puskesmas for UKM. Other UKM activities refer to norms, standards, procedures and criteria (NSPK) related to program implementation.
2. (*) In accordance with the needs of health services in the working area of the Puskesmas.
3. (**) UKM Development types and forms can be adjusted to the health problems priorities, specificity of the work area, and the potential resources available in each Puskesmas.

II. Individual Health Efforts (UKP)

No.	Measures	Activities	Puskesmas in urban areas	Puskesmas in rural areas	Puskesmas in remote/very remote areas
a.	**General practitioner services**		General examination services		
b.	**Dental and oral health services**		Dental and oral health services		
c.	**Family health services that are UKP in nature**		Family health services that are UKP in nature		
d.	**Emergency services**		Emergency services		
e.	**UKP nutrition services.**		UKP nutrition services		
f.	**Delivery service**		Delivery service		
g.	**Inpatient services at Puskesmas that provide inpatient care**			Inpatient services at Puskesmas that provide inpatient care	
h.	**Pharmaceutical services**		Pharmaceutical services		
i.	**Laboratory services**		Laboratory services		

Appendix 3. Mapping of Structural Challenges Based on The Primary Health Care Theory of Change

PHC approach	Integrated health services with an emphasis on primary care and essential public health functions				Empowered people and communities					Multisectoral policy and action				
PHC Levers	Strategic Levers				Operational Levers									
	Political commitment and leadership	Governance and policy frameworks	Funding and allocation of resources	Engagement communities and others stakeholders	Models of care	Primary health care workforce	Physical infrastructure	Medicines and other health products	Engagement with private sector providers	Purchasing and payment systems	Digital technologies for health	Systems for improving the quality of care	Primary health care-oriented research	Monitoring and evaluation
	1	2	3	4	5	6	7	8	9	10	11	12	12	14
Keywords (results from Delphi, Plenary Delphi , and STEEPV)	Law National Health System	Human capital bureaucracy	Primary health care budget	Institutionalization of cadres	Individual Health Measures (UKP)	Family Primary Service Medical Specialists	Puskesmas Power supply;	Standard code for registered medicine	Independent Practitioners (DPM)	Fee for service;doctor	Telemedicine in Indonesia; pros and cons of medical practice	Basic Health Needs (KDK)	Climate change and health	Monitoring incentives and disincentives
	National health system	Ministry of Health and Ministry of Villages; Ministry of Health and Ministry of Finance; Ministry of Health and Bappenas	BPJS participants Distribution	Health cadre incentives	Public Health Efforts (UKM)	Health Workers, Health Promotion and Behavioral Science	Internet network; Puskesmas		Midwives Independent Practices (BPM)	Doctors' remuneration	Health startups	Standard inpatient classes	Health data integration	Puskesmas accreditation
	Regional health systems Health	Health budget from year to year	BPJS cost reduction	Communication on Behavior Change		Restructuring Ministry of Health	Telemedicine		Private clinics	Out-of-pockets (OOP) decline	Health diagnosis technology	Evaluation of BPJS benefit packages	Community participation research	
	The concept of primary health care	Evidence-based policy in health				Non-health workers in the field			Private hospital	Small capitation; Puskesmas; clinics	Utilization of health big data	Special Allocation Fund (DAK) reforms		
		Integration of primary care services and doctors							Private health insurance		Regulatory sandbox; Indonesia	Health data quality		
									Foreign investment (FDI) in the health sector					
PHC results	Improved access, utilization and quality				Improved participation, health literacy and care seeking					Improved determinants of health				

Appendix 4. PHC Foresight Expert Resource Persons

No.	Name of Expert Resource	Position	Institution	FGD/Delphi 1 (Policy Direction)	FGD/Delphi 2 (Economic & Investment Case)	Plenary Delphi	STEEPV
1.	Prof. dr. Adi Utarini, M.Sc., MPH., Ph.D	Professor of FKKMK	Universitas Gadjah Mada	✓	-	✓	**-**
2.	dr. Ahmad Fuady, PhD	Researcher and Lecturer at the Faculty of Medicine	Universitas Indonesia	✓	✓.	-	-
3.	Prof. dr. Ali Ghufron Mukti, M.Sc., Ph.D	Executive Director	BPJS Health	-	-	✓	-
4.	Dr. dr. Andreasta Meliala, DPH. MKes, MAS	Director of FKKMK Hospital Management	Universitas Gadjah Mada	✓	✓	-	✓ (Econ)
5.	Dr. Anis Fuad	Researcher and Lecturer of Population Informatics	Universitas Gadjah Mada	-	-	-	✓ (Tech)
6.	Prof. Dr. Ir. Antonius Suwanto, MSc	Commission on Engineering Sciences	Indonesian Academy of Sciences (AIPI)	✓	-	✓	-
7.	dr. Ari Dwi Aryani, MKM	Deputy Director for Primary Health Insurance Financing	BPJS Health	-	✓	-	-
8.	Prof. drh. Aris Junaidi, Ph.D	Director of Learning and Student Affairs	The Minister of Education, Culture, Research and Technology	✓	-	-	-
9.	dr. Bachti Alisjahbana, Sp.PD-KPTI, Ph.D	Medical Sciences Commission	Indonesian Academy of Sciences (AIPI)	✓	-	✓	-

No.	Name of Expert Resource	Position	Institution	FGD/Delphi 1 (Policy Direction)	FGD/Delphi 2 (Economic & Investment Case)	Plenary Delphi	STEEPV
10.	Dr. Brian Sri Prahastuti	Deputy II Senior Expert	Presidential Staff Office (KSP)	✓	✓	✓	-
11.	Prof. Dr. dr. Budi Wiweko, Sp.OG, MPH	Medical Sciences Commission	Indonesian Academy of Sciences (AIPI)	✓	-	-	-
12.	dr. Dante Saksono Harbuwono, Sp.PD-KEMD, Ph.D	Deputy Minister of Health	Ministry of Health	✓	-	-	-
13.	dr. Darius Erlangga, MPH	Academic	London School of Hygiene and Tropical Medicine	-	✓	✓	-
14.	Prof. David Handojo Mulyono, SpPPD, FINASIM, Ph.D	Medical Sciences Commission	Indonesian Academy of Sciences (AIPI)	✓	-	✓	-
15.	Dewi Amila Solikha, SKM. MSc	Head of Public Health Sub-Directorate of the Public Health and NutritionDirectorate	Ministry of National Development Planning/Bappenas	-	✓	-	-
16.	Dewi Bramono, BS, MS, MBA	CEO	Klinik SehatQ	-	-	-	✓ (Econ)
17.	dr. Donald Pardede, MPPM			✓	✓	✓	-
18.	dr. Elvina Karyadi, , MSc., SpGK, Ph.D	Senior Health Specialist	World Bank	✓	-	-	-
19.	Dr. Emi Nurjasmi, M.Kes	Chairperson of	The Indonesian Midwives Association (IBI)	✓	-	✓	-
20.	Prof. Dr. Endang Sukara	Basic Sciences Commission	Indonesian Academy of Sciences (AIPI)	-	✓	-	-.

No.	Name of Expert Resource	Position	Institution	FGD/Delphi 1 (Policy Direction)	FGD/Delphi 2 (Economic & Investment Case)	Plenary Delphi	STEEPV
21.	Faisal Basri, S.E.,M.A	Senior economist		-	✓	-	✓ (Politics)
22.	Gita Putri Damayana, S.H., LL.M	Executive Director	Center for Legal Studies and Policy (PSHK)	✓	-	-	-
23.	Gita Syahrani, S.H., LL.M	Head of Secretariat	Lingkar Temu Kabupaten Lestari (Sustainable Regency Collective- LTKL)	-	-	-	✓ (Environ)
24.	Dr. RM Sri Hananto Seno, drg., Sp.BM(K)., MM.	Chairperson	The Indonesian Dental Association (PDGI	✓	-	-	-
25.	Dr. Harif Fadhillah, S.Kp.,S.H.,M.Kep.,M.H	Chairperson	The Indonesian National Nurses Association (PPNI)	✓	-	-	-
26.	Henny Supolo Sitepu, S.S	Chairperson	Cahaya Guru Foundation	-	-	-	✓ (Value)
27.	Prof . dr. Herawati Sudoyo, Ph.D	Commission on Medical	Indonesian Academy of Sciences (AIPI)	✓	-	-	-
28.	Ir. Heru Prasetyo	Chairman, Board of Patrons	Indonesia Business Link	-	-	-	✓ (Value)
29.	dr. Irvan Afriandi Grad.Dipl, OEH, MPH, Dr.Ph	Lecturer at the Department of Public Health, Faculty of Medicine	Universitas Padjadjaran	✓	✓	-	-
30.	dr. Isti Ilmiati Fujiati, MSc.CM-FM,	Head	KKLP Collegium	-	-	-	✓

No.	Name of Expert Resource	Position	Institution	FGD/Delphi 1 (Policy Direction)	FGD/Delphi 2 (Economic & Investment Case)	Plenary Delphi	STEEPV
	M.Pd.Ked						(Value)
31.	dr. Kalsum Komaryani, MPPM	Director of Quality and Accreditation of Health Services	Ministry of Health	✓	✓	-	-
32.	Prof. dr. Laksono Trisnantoro, M.Sc., Ph.D.	Director of FKKMK Health Policy and Management	Universitas Gadjah Mada	-	-	✓	-
33.	dr. M. Subuh, MPPM	General Chairperson of	Association of Health Departments (Adinkes)	✓	-	-	-
34.	Prof. Mayling Oey-Gardiner, Ph.D	Social Science Commission	Indonesian Academy of Sciences (AIPI)	✓	✓	-	-
35.	Dr. Pandu Harimurti, MPPM	Senior Health Specialist	World Bank	✓	-	✓	-
36.	Prastuti Soewondo, Ph.D	Special Staff to the Minister of Health	Ministry of Health	-	-	✓	-
37.	Prof. dr. Pratiwi Pujilestari Sudarmono, Ph.D., SpMK(K)	Professor of Microbiology	Universitas Indonesia	✓	✓	-	-
38.	Pungkas Bahjuri Ali, S.TP, MS, Ph.D	Director of Public Health and Nutrition	Bappenas	✓	-	-	-
39.	dr. Putu Moda Arsana, Sp.PD-KEMD. FINASIM	Chairperson	Indonesian Medical Council (KKI)	✓	-	-	-
40.	Prof. Dr. dr. Ratna Sitompul, SpM(K)	Dean of the Faculty of	Universitas Indonesia	✓	✓	✓	,

No.	Name of Expert Resource	Position	Institution	FGD/Delphi 1 (Policy Direction)	FGD/Delphi 2 (Economic & Investment Case)	Plenary Delphi	STEEPV
		Medicine					
41.	Rimawan Pradiptyo, SE, M.Sc., Ph.D	Faculty of Economics and Business	Universitas Gadjah Mada	✓	-	✓	-
42.	Prof. Dr. Satryo Soemantri Brodjonegoro	Chairman	Indonesian Academy of Sciences (AIPI)	✓	✓	✓	✓
43.	Prof. Dr. dr. Sofia Mubarika Haryana, M.Med., Sc Ph.D	Medical Sciences Commission	Indonesian Academy of Sciences (AIPI)	-	-	✓	✓ (Environ)
44.	Prof. dr. Sultana Muhammad Hussein Faradz, Ph.D	Medical Sciences Commission	Indonesian Academy of Sciences (AIPI)	✓	-	✓	-
45.	drg. Usman Sumantri, MSc	Director	Indonesian Hospital Association (PERSI)	✓	✓	-	-
46.	dr. Yodi Mahendradhata, MSc., Ph.D, FRSPH	Vice Dean for FKKMK Research and Development	Universitas Gadjah Mada	✓	✓	-	-
47.	dr. Yudhi Prayudha Ishak Djuarsa, MPH	Advisor to CISDI	Governance and Primary Health Carecare	-	-	-	✓ (value)
48.	Prof. Dr. Yunita Triwardani Winarto	Commission	Indonesian Academy of Sciences (AIPI)	✓	-	✓	✓ (social)

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