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Bridging the gap: financing health promotion and disease prevention in Indonesia

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Abstract

Background Spending on preventive care in low- and middle-income countries (LMICs), including Indonesia, is much lower than spending on curative care. There has been a pressing need to develop a clear pathway to increase spending on preventive care. This study aimed to assess the current financing landscape for health promotion and disease prevention in Indonesia and, subsequently, to develop a framework and recommendations for future health promotion financing in the country.

Methods We adopted a mixed-method approach to gather information from all relevant stakeholders from December 2022 to June 2023. For the qualitative approach, we conducted (a) in-depth interviews (IDIs) and (b) focus group discussions (FGDs) with government officials at national and district levels, academics, professional organizations, healthcare workers in primary healthcare centres (PHCs), community health volunteers, non governmental organizations and private companies. For the quantitative approach, we applied a national online survey to healthcare workers involved in health promotion in PHCs. IDIs and FGDs were conducted with purposefully selected resource persons at the national level, five selected districts across Indonesia, and within 15 primary health offices and their communities. All qualitative data were recorded, transcribed, coded, interpreted, and then triangulated with national survey findings to develop the financing framework.

Results We identified gaps between the theory and practice of health promotion and disease prevention. These included the limited scope of health promotion initiatives, lack of direction and coordination between ministries, agencies and government levels, limited availability and capacity of health promoters, various yet uncoordinated funding resources and inflexibility in using the funds. To bridge the gap, the framework we developed suggests strengthening the legal and regulatory basis, strategically prioritizing financing arrangements, promoting evidence-based health promotion activities, developing the capacity of health promoters, enhancing the health financing information system and improving monitoring and evaluation.

Conclusions Identified gaps and challenges in health promotion and disease prevention initiatives inform the development of our framework for future health promotion financing. This framework assists the national government in organizing national health promotion financing strategies and potentially serves as a valuable model for other LMICs.

Keywords Health system, Health financing, Community health volunteer, Health promoter

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Background

Globally, health expenditure on preventive care in 2020 was recorded at 32% of the total health expenditure, which is much lower compared with curative care at 60% [1]. The spending for preventive care in low- and middle-income countries (LMICs) also shows similar trend, which is 11% of the total expenditure, much lower than spending for curative care, at 54%. Indonesia, a middle-income country with 278-million inhabitants and multiple burdens of health – backlog of infectious diseases, malnutrition and maternal mortality – only spent 17% of its total health expenditure for health promotion and disease prevention services [2, 3]. The national health expenditure has still been mainly spent on curative services.

These figures are worrying. Despite the global awareness of the importance of preventive measures, financing health promotion and disease prevention was still overlooked. Enhancing the initiatives in health promotion and disease prevention is substantial, given that the trends of disease burden globally are shifting from communicable to non-communicable diseases (NCDs) which are mostly preventable [4, 5]. The 2019 Global Burden of Disease also shows that NCDs are responsible for the highest proportion of disability-adjusted life years (DALYs) globally, comprising 64% of the burden, while communicable, maternal, neonatal and nutritional diseases account for 26% [4]. A comparable pattern is evident in the 2019 burden of diseases in Indonesia, wherein NCDs account for 72% of the overall burden, while communicable, maternal, neonatal and nutritional diseases collectively constitute around 21% [5]. This highlights that Indonesia is among the countries that faces challenges in overcoming the multiple burdens of disease in addition to other health problems that need to be solved.

However, financing support for controlling such a burden remains much less than for other diseases, and there has been a struggle to align health promotion initiatives to overcome NCDs with the enhancement of universal health coverage (UHC). Although the funding directed towards NCD development assistance for health (DAH) increased by 4.7% in 2020 compared with spending in 2019 [6], the pace is much slower than the burden caused by NCDs; and this only constitutes less than 3% of all DAH [7]. In Indonesia, despite the Jaminan Kesehatan Nasional program, which promotes UHC, the funding for health promotion is much lower that the funding directed for public health insurance, which focuses on payment for medical treatment. In 2014, only around 1% of health expenditure was spent on preventive and promotive activities [8]. The proportion was higher in 2021, but this was owing to the COVID-19 pandemic which forced more promotive and preventive actions rather than a real reallocation of funding strategies [2]. Although the importance of health promotion and disease prevention have been cultivated since the 1978 Alma Ata Declaration and the latest 2023 United Nations High-Level Meeting [9, 10], health financing reforms often leave health promotion and disease prevention behind [11]. It is, therefore, critical to call for more investment in preventive health systems to ensure that people can achieve the highest attainable standard of physical, mental and social well-being, as well as having a high productivity and quality of life [12, 13].

Health promotion and disease prevention should also extend beyond initiatives within the health sector and involve an "intersectoral action for health" through a Health in All Policies framework to address the social determinants [14, 15]. Moreover, decentralized health system in Indonesia, has resulted in spending being dispersed among authorities at subnational level [16]. It is, therefore, crucial to monitor the progress of health promotion initiatives in all sectors beyond healthcare and between agencies and government levels. However, measuring the spending of intersectoral action for health poses challenges owing to distinct budgeting systems, targets and indicators in each sector [17]. It complicates monitoring and evaluation of how much spending has been utilized for health-related programs.

The National Health Accounts (NHA) offers guidance on defining and tracking spending on "preventive care", but its operational definition is constrained by technical feasibility [2, 18]. A study in Thailand conceptualized a financing framework for health promotion and disease prevention, distinguishing between service-based interventions provided by healthcare or public health providers to individuals, and population-wide measures, such as improving water sources, sanitation and reducing tobacco consumption [19]. Compared with its neighbouring country, Indonesia lacks a clear financing framework for health promotion and disease prevention, making it challenging to evaluate the adequacy of funding and assess progress. This study, therefore, aimed to assess the current financing landscape for health promotion and disease prevention in Indonesia and, subsequently, to develop a framework and recommendation for future health promotion financing in the country.

Methods

In the development of the framework for financing health promotion and disease prevention, we gathered information from all relevant stakeholders at different levels – national, district and community – from December 2022 to June 2023. To achieve this, we adopted a mixed-method approach, integrating qualitative methods, i.e. (a) in-depth interviews (IDIs) and (b) focus group

discussions (FGDs), along with (c) a quantitative online survey.

For qualitative methods, we conducted IDIs and FGDs with multi-stakeholders to obtain comprehensive perspective on health promotion and disease prevention. The IDIs and FGDs explored the existing strategies, implementation and financing of health promotion and disease prevention, as well as their challenges, gaps between theory and practice, and future direction.

IDIs were held at the national level with 22 stakeholder representatives from (a) academic or experts in health promotion from universities and (b) ministries related to health promotion planning, implementation and financing, including Ministry of Health, Ministry of Finance, and Ministry of Home Affairs. FGDs were held in separate sessions with 14 persons representing stakeholders at the national level, 19 health officers at the district level, 30 healthcare workers at primary healthcare centres, 30 community health volunteers (CHVs) and three representatives from non-government stakeholders (Table 1). To capture financing health promotion in district, primary care and community level, we purposively selected five districts (Solok, West Sumatera; Bogor, West Java; Magelang, Central Java; Palangkaraya, Central Borneo; and South-East Timor, East Nusa Tenggara), based on the epidemiological health burden and fiscal capacity in the three regions (western, central and eastern) in Indonesia. Subsequently, within each district, we purposefully chose three sub-districts after consultation with each DHO (Annex A).

a. In-depth interviews

We conducted interviews with representatives from the central government, district-level policymakers and academics to capture their insights on the theory of health promotion and disease prevention, as well as its practical implementation on the ground. The interviews delved into the financing mechanisms for health promotion and disease prevention, identifying challenges and discussing potential strategies to enhance the funding mechanism.

b. Focus group discussions

The first FGD invited stakeholders at the national level, including professional organizations and academics, to review current funding mechanisms for health promotion and disease prevention. The FGD also explored existing and potential funding sources, discussed challenges in funding, potential common solutions and identified best practices in health promotion and disease prevention. Subsequently, another FGD was conducted involving participants from non-government stakeholders, including civil society organizations and private companies to gather more diverse perspectives regarding health promotion and disease prevention, including identifying funding gaps, discussing potential solutions to address the gaps and identifying utilization of resources from non-government stakeholders. We also explored best practices related to how non-government stakeholders held their actions by increasing community involvement and ownership in health promotion and disease prevention initiatives as well as exploring the potential for collaboration between government and non-government stakeholders to ensure the sustainability of health promotion and disease prevention initiatives. We held FGDs at each selected district and invited representatives from DHOs. At primary care and community levels, we conducted FGDs with healthcare workers in primary health centres (PHCs) and community health volunteers (CHVs) to discuss the implementation and challenges of health promotion and disease prevention programs and financing.

Team members (A.F., M.A., M.H., A.A., A.S., M.A.N.H. and T.P.) had a meeting prior IDIs and FGDs to harmonize understanding of the aim and questions asked in IDIs and FGDs. To facilitate the understanding, we developed interview guidance. This guidance emphasized key indicators and variables that were pertinent to the research objectives.

c. Online survey

Health promotion and disease prevention programs are presently mostly being executed in PHCs. Therefore, to complement and triangulate the findings from qualitative approach, we deployed an online questionnaire link using a REDCap platform (www.redcap.fkui.ac.id) to healthcare personnel at PHCs throughout Indonesia who are involved in health promotion and disease prevention for at least one year. The questionnaire comprised inquiries about the funding sources for health promotion and disease prevention, along with challenges in allocating and utilizing the funds. The online, self-administered questionnaire underwent prior content and face validation within the team, as well as testing with five respondents, before deployment.

We attempted to ensure data representativeness. Considering the 38 provinces in Indonesia, we aimed for representativeness by receiving a minimum of 20 completed responses from 29 provinces (75%), totalling 580 responses at a minimum. We monitored responses submitted to the system every 3 days and coordinated the questionnaire deployment through the Directorate of Public Health Governance, MoH, from 11 April to 5

Table 1 Participants of in-depth interviews and focused group discussions

Level	Stakeholders	Gender
In-depth interviews, *IDIs*		
National level	Ministry of Home Affairs	One female, one male
	Ministry of Finance	Five males
	Ministry of Villages, Development of Disadvantaged Regions, and Transmigration	One male
	Ministry of Health	
	Directorate of Health Promotion	Three females
	Bureau of Planning and Budget	One male, One female
	Directorate General of Public Health	Two females
	National Health Account	One female
	Academics	Three females, three males
Focus groups discussions, *FGDs*		
FGDs with national stakeholders	Indonesian Medical Association	Two females
	Indonesian Midwifes Association	Two females
	Indonesian Public Health Association	Two males
	Indonesian Health Promoters Association	One female
	Primary Health Centre Physician Association	One male
	Academics, universities	Two females, two males
	National Development Plan Agency, *BAPPENAS*	One female, one male
FGDs at district level[a]	Solok DHO	Three females
	South-East Timor DHO	Three females, one male
	Magelang DHO	One female, three males
	Bogor DHO	One female, one male
	Palangkaraya DHO	Five females, one male
FGDs at primary health centres[b]	PHCs in Solok	Five females, one male
	PHCs in South-East Timor	Four females, two males
	PHCs in Magelang	Six females
	PHCs in Bogor	Five females, one male
	PHCs in Palangkaraya	Four females, two males
FGDs with community health volunteers[c]	CHVs in Solok	Six females
	CHVs in South-East Timor	Nine females
	CHVs in Magelang	Six females
	CHVs in Bogor	Six females
	CHVs in Palangkaraya	Nine females
FGDS with non-government stakeholders	Civil society organizations	One male, one female
	Private company	One female

[a] Held at each district

[b] Held at each primary health centre

[c] Held on the basis of primary health centres coverage area

May 2023. In instances where there was an insufficient number of responses from a specific province, we approached personnel at the respective Provincial Health Office to encourage participation.

Data synthesis and analysis

We employed content analysis to gain a comprehensive understanding of the achievements, challenges and potential enhancements in the current implementation of health promotion and disease prevention programs and their financing. To systematically analyse and derive insights from these discussions, the dialogue results were transcribed into text format. Additionally, qualitative data on challenges in financing health promotion and disease prevention were obtained through an online questionnaire. Subsequently, we identified, coded and organized keywords into thematic groupings. We used inductive coding, meaning no pre-developed system

of codes was used. Codes were created on the basis of the data itself, and we constructed a coding structure on the basis of our review [20]. For thematic grouping, we examined the coded data for recurring concepts, relationships and structures by counting the most frequently occurring topics or concepts to produce the themes.

A quantitative data analysis was applied using SPSS 27.0 to assess funding sources, types of health promotion activities, challenges encountered in financing and implementing health promotion and solutions implemented to address the challenges. The results were presented in number (*n*) and percentage (%).

Additionally, we listed health promotion and disease prevention priorities by scoring technique using data recorded in four databases. The databases were (a) 2019 GBD [21] using DALY-based indicator, (b) disease prevalence in Indonesia obtained from the 2018 Basic Health Research, (c) disease prevalence based on health service utilization obtained from the 2021 Indonesia Health Profile and (d) disease prevalence with the highest costs obtained from the 2021 BPJS-K report. The scoring technique determined which diseases should be prioritized for health promotion and prevention initiatives (see Annex C).

We conducted triangulation to enhance the reliability and validity of the study findings. This process involved comparing and cross-referencing the findings obtained between stakeholder groups and between quantitative and qualitative data. The findings were employed to systematically map the problems and challenges of initiatives, develop a framework of financing and list potential improvements of health promotion and disease prevention initiatives and financing. To ensure accuracy, six experts in health policy, health economics and health promotion were invited to a panel to validate the framework. This validation process included (a) aligning perspectives and achieving a common understanding of key terminologies and definitions related to health promotion and disease prevention, and (b) emphasizing critical elements pivotal to the success of the financing mechanism for health promotion and disease prevention.

Patient and public involvement

During this study, we engaged community health volunteers, private companies and civil society organizations in interviews and discussions.

Results

Gaps between theory and practice

The existing practice of health promotion and disease prevention is limited to activities within healthcare facilities and often neglects health promotion initiatives that are conducted outside healthcare facilities and reach healthy people and people at risk, such as initiatives in enhancing people's health literacy and encouraging physical activity. The practice also lacked initiatives at the primordial level of prevention with universal target population and public setting, such as establishing green open spaces (see Fig. 1). Initiatives addressing social determinants of health, which are widely recognized as health promotion and disease prevention at the primordial level and universal population, also faced lack of recognition in national strategic policies.

Experts cited the importance of addressing social determinants of health, which has been reflected from two widely implemented health promotion initiatives in Indonesia: (a) Clean and Healthy Living Behaviour (*Perilaku Hidup Bersih dan Sehat*) and (b) the Healthy Living Movement (*Gerakan Masyarakat Hidup Sehat*, GERMAS). These two initiatives faced significant challenges influenced by the social determinants that lie beyond the MoH's sphere of influence. Therefore, experts suggested that effective intersectoral coordination with clear objectives and direction was deemed necessary but proved to be complex.

Such precise direction is lacking, with a shortage of outcome-based indicators. The efforts within ministries and agencies have not been oriented towards "upstream" initiatives, such as developing policies or setting up infrastructure needed for healthy population. Instead, the focus has been perceived as predominantly on "downstream" actions. In addition, health promotion across ministries and agencies were unstructured, with unclear role assignments among ministries/agencies. These issues have led ministries and agencies to treat health promotion programs more as "checkbox" activities rather than a comprehensive and multisectoral approach.

> *"For example, (setting indicator of) providing fruits and vegetables during a meeting in a Ministry, and (doing this) is considered as they have been doing the Health in All Policy. This is still a downstream action". In-depth interview with academic.*

In the practice, given that current health promotion and disease prevention has been dominated in healthcare facilities, there has been limited number of healthcare workers focusing on health promotion (henceforth called "health promoters"). However, an expert cited in an FGD that out of 10 321 PHCs in Indonesia, only 6726 (65%) have health promoters in 2023. This shortage has resulted from limited recruitment by the local governments and lack of priority for assigning health promoters in healthcare facilities. On the other hand, the available health promoters have been often assigned to positions outside health promotion programs or have

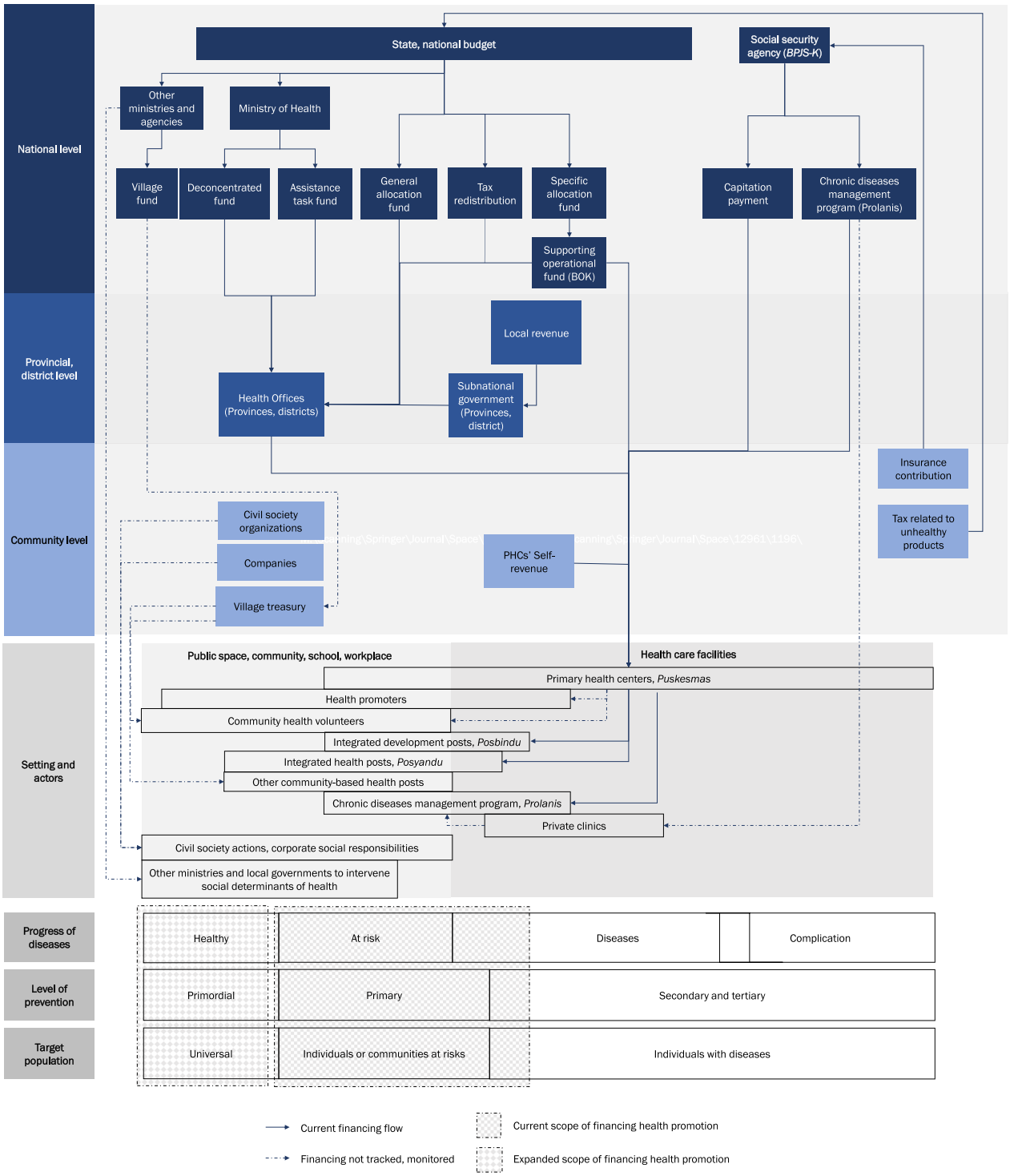

Fig. 1 Current and future financing framework for health promotion and disease prevention in Indonesia

not received sufficient technical and financial support for implementing health promotion programs. These problems led to suboptimal outputs of health promotion.

Most of health promotion initiatives at the community level have been delivered by CHVs – individuals selected from and by the community to work voluntarily in mobilizing the community to participate in health

empowerment. However, apart from their crucial role in community-based health promotion, there have been issues regarding CHVs' position, status, rights, obligations, and their lack of competence. Although they mostly work in health sector, they are structurally under the Ministry of Home Affairs and local governments. Later, with the village empowerment initiatives, the Ministry of Villages and Regional Development has also taken an interest in CHVs (see Annex B). However, management of CHVs, in terms of function, structure and financing, has not been explicitly regulated and coordinated – leaving them working as volunteers without any specific incentives and capacity development. As a consequence, community-based health promotion and disease prevention are often left behind.

Current financing for health promotion and disease prevention

Because of this gap between theory and practice, the financing for health promotion and disease prevention was too complicated to be mapped. The Indonesian NHA, which periodically captures national health expenditure, also grapples with some challenges. These include limited access to data on budget allocation and spending, incomplete details on where and how much the money was used and poor data quality. There was also a lack of regulations to govern the mechanism of accessing data of budget spending for health promotion, both within ministries/agencies at the national level and between central- and district-level governments. These issues, therefore, hinder the comprehensive mapping of health financing across ministries and agencies at the central level of government, as well as between national and subnational governments.

The decentralization policy enacted after the Indonesian political reform in the early 2000s shifted authorities and responsibilities, including health budgeting, allocation and spending, to provincial and district-level governments (see Fig. 1). Despite decentralization, some funding schemes still come from the national-level government to the provincial and district levels, such as General and Specific Allocation Funds (*Dana Alokasi Umum* dan *Dana Alokasi Khusus*). However, only the tax revenue sharing fund from tobacco products and the Supporting Operational Fund for Health (*Biaya Operasional Kesehatan*, BOK) dedicated to PHCs have specific allocation funding for health promotion initiatives. Additionally, PHCs have two other revenue sources: capitation payments from the Social Security Agency for Health, a portion of which can be allocated towards health promotion initiatives, and self-generated revenue from patient registration fees that can be earmarked for health promotion programs.

Despite the various funding resources, IDIs and FGDs participants suggested that most provinces and districts remain dependent on these funding schemes transferred by the central government, particularly in districts with limited fiscal capacities and locally generated revenues. The national survey, where we obtained 1760 completed responses across 203 districts, showed that 1721 (98%) of them relied on the BOK funding scheme (see Fig. 2).

The majority ($n=1241/1721$, 72%) of PHCs receiving BOK funds reported that this funding scheme lacked flexibility. PHCs can only allocate these funds to specific programs predefined by the central government, primarily based on large-scale initiatives, such as *GERMAS*. This restriction severely limits PHCs' ability to implement health promotion programs tailored to local needs. Utilizing BOK funds for purposes beyond the predefined programs may result in disincentives, such as reduced funding in the following fiscal year.

Although combining multiple funding schemes for health promotion and disease prevention programs at PHCs is an alternative, findings from IDIs and FGDs revealed its complexities. We identified three technical issues: coordinating and adjusting budget planning across multiple schemes is complex; the process of combining resources is time-consuming, leading to delays in budget approval and program implementation; and BOK funding adjustments should be handled at the central government level, potentially leading to uncertainty in proposing activities for the upcoming year. Consequently, some activities may not receive funding and could potentially remain unimplemented unless PHCs secure alternative funding sources. Additionally, some funding scheme regulations are restrictive, making complementary funding impossible.

Another prominent funding scheme that arose in the IDIs and FGDs was the Village Fund (*Dana Desa*), a funding scheme transferred directly from the national budget to village offices to support village-based development programs. This funding scheme can support community-based health promotion programs through a bottom-up approach, involving community participation, following approval at the village deliberation. During the activities and budget planning, community will be invited to arrange annual funding priorities. The involvement may include inviting HCVs, community leaders, and laypeople to brainstorm potential activities related to health promotion and disease prevention, such as health education and campaign, clean toilet, healthy behaviour, childcare, nutritional counselling, exclusive breastfeeding and supplementary feeding [22]. These activities will also support efforts to "accelerate the achievement of

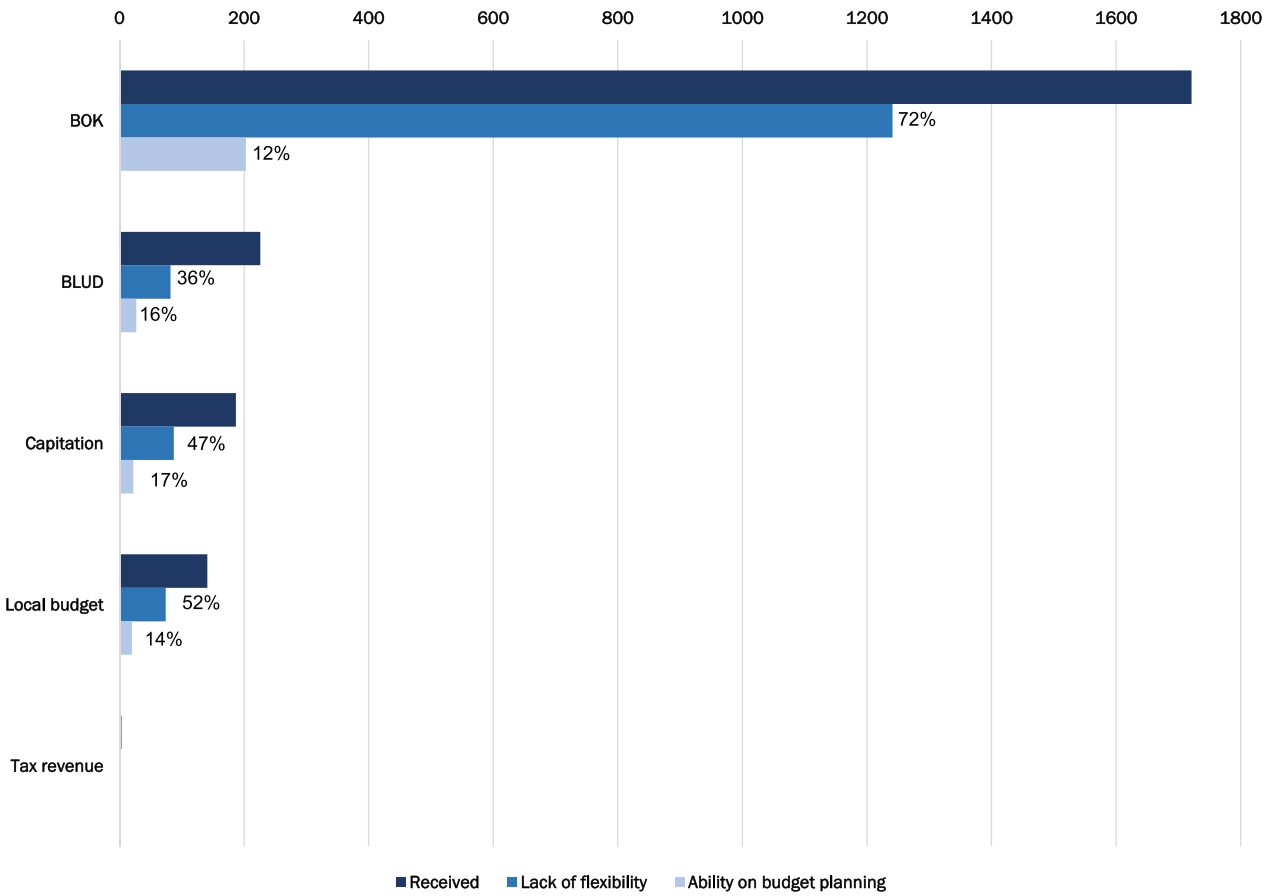

Fig. 2 The flexibility and ability on budget planning of funding resources received for health promotion and disease prevention in Indonesia

Village SDGs, which are realized through basic services via Desa Peduli Sehat". The main challenge of using this fund is the varying capacity of village leaders and community to arrange priorities and their skills in community participation. While some villages are able to creatively and independently utilize Dana Desa to promote health and prevent disease, others struggle to utilize the funding and merely follow the guided instruments provided by the central government. When the community participates in the planning, there is also potential for competing interests and aspirations.

Future health promotion financing in Indonesia

Prior to defining the future financing of health promotion and disease prevention, the IDIs and FGDs highlighted that, firstly, the expansion of the definition and scope of health promotion and disease prevention beyond activities implemented in healthcare facilities needs to be acknowledged on a legal basis. Academics and national stakeholders at the IDIs and FGDs agreed that regulations need to incorporate all initiatives in primordial, primary and selected secondary levels of prevention, including disease screening. A participant cited the "Stunting Reduction Acceleration" program, enacted by the President's Regulation, as a major national example that health promotion and disease prevention require multisector involvement. However, implementing such a large-scale program requires significant resources and complex coordination. It would be nearly impossible to implement health promotion and disease prevention for all diseases and, therefore prioritization is necessary.

Secondly, since strategic prioritization is perceived as crucial, we listed the prioritized diseases on the basis of scoring as described in the Methods section: NCDs (such as stroke, ischemic heart disease, diabetes and chronic obstructive pulmonary disease), malnutrition, infectious diseases [such as Tuberculosis and human immunodeficiency virus (HIV)] and maternal and child health problems. Additionally, we formulated the development of joint output and outcome indicators involving directorates and institutions responsible for priority health promotion programs (see Annex C and Annex D). This is perceived as crucial for demonstrating

the tangible output and impact of a program within a specified achievement period.

Thirdly, all FGD participants at the national level agreed upon the importance of evidence-based health promotion activities, as they can facilitate effective and efficient implementation. The evidence includes identified needs and previously proven cost–effective health promotion programs, which can support finding solutions to address existing problems. To accomplish this goal, the availability and capacity development of health promoters are crucial.

To increase the availability of health promoters, district governments are required to recruit and deploy individuals who fulfil the qualifications of health promoters stipulated by the Minister of Health's Decree on Health Promoters to all PHCs in the district. Midwives and nurses are allowed to deliver health promotion activities after receiving sufficient training in health promotion. District governments failing to comply with this requirement are subject to corrective measures.

IDIs and FGD participants suggested that health promoters need capacity building in budget planning to ensure that health promotion programs are sufficiently funded. In addition, discussions led to the identification of other skill sets that should be improved, including mapping resources (actors and funding) and coordinating technical aspects at the district level, advocacy and engagement across multiple sectors, developing programs, establishing their targets, defining indicators for evaluation and establishing community engagement.

To fortify the financing system and evaluate the effectiveness of financing health promotion, academics suggested that the health financing information system (*Sistem Informasi Pendanaan Kesehatan*, SIPK) needs to be enhanced to capture the holistic fund stream. The system can help ensure a balance between flexibility and accountability in using the funds, which is perceived as complicated.

> *"We have (to ensure) the balance between (the money. It) is rigid, we can't check it (if the fund can be used beyond those guided). Meanwhile, to be accountable, there must be results (of the program). So, we are in a balance between flexibility and accountability. So, the problem is not whether it is rigid or not rigid. It is more about financial regulations than program flexibility". (IDI, Policy maker)*

On the basis of the findings, we developed a framework of financing health promotion and disease prevention (Fig. 3).

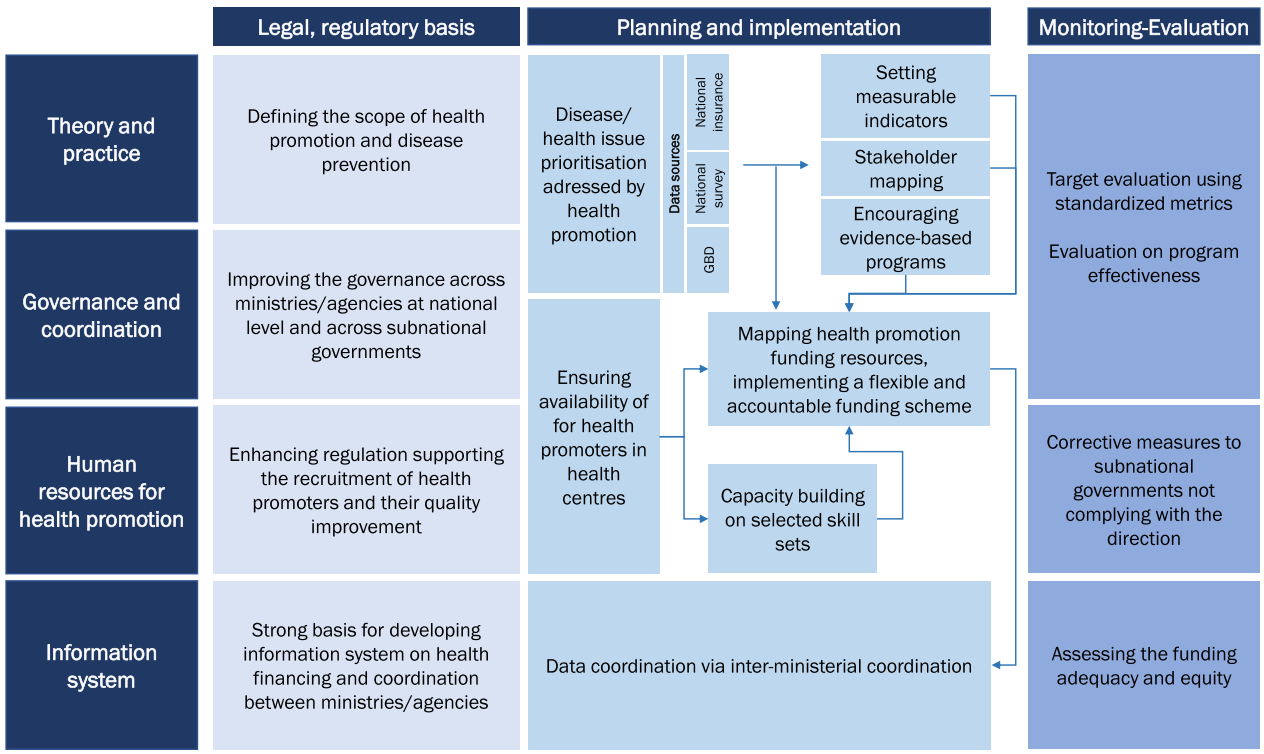

Fig. 3 Framework for financing health promotion and disease prevention in Indonesia

Discussion

This study has successfully assessed the current implementation of health promotion and disease prevention in Indonesia and identified gaps between the implementation and theory. Through the assessment, we created a framework for implementation of health promotion and disease prevention in Indonesia, which can support the financing mechanism for health promotion and disease prevention. The framework includes the strengthening of legal and regulatory basis; planning and implementation to (a) reduce the gaps between theory and practices, (b) improve governance and coordination, (c) enhance human resources availability and capacity and (d) increase the capacity of information system; and improve monitoring and evaluation.

Enhancing legal, regulatory basis

Health promotion, is key to reducing the disease burden and reaching the highest standard of health, as it focuses on empowering people to prevent diseases and illness by, as defined by the Ottawa Charter of Health, enabling people to increase control over and improve their health [23, 24]. However, this study highlights that health promotion and disease prevention programs in Indonesia have not been well executed as it is theoretically defined as enhancing individuals' or communities' capacities to control their health and its determinants. They are often limited to health-related programs implemented within healthcare services, and there is a notable absence of evidence in addressing the social determinants of health in Indonesia [25]. The limited comprehension of health and health promotion, marked by ambiguity regarding the concept, scope and operational definition within government policies and activities [26], leads to a disjointed implementation of health promotion across ministries and agencies. This complicates the coordination of comprehensive health promotion efforts.

To narrow the gaps, it is critical to firstly establish a clearly articulated legal basis and national agenda or strategy for health promotion and disease prevention for better financing mechanism of health promotion and disease prevention. This study highlights that reconsidering and expanding the definitions of health promotion and disease prevention within a broader context is urgently required to develop a strong basis of comprehensive health promotion strategies, including to implement the Health in All Policy and benefit the entire community [27].

Enhanced regulation can facilitate and mandate the expansion of current health promotion and disease prevention strategies and initiatives, addressing identified gaps by amplifying existing multisectoral and intersectoral efforts [28]. Intersectoral collaboration should commence with active involvement of all pertinent institutions in reviewing the nation's health plan, collectively brainstorming potential collaborative actions and establishing joint activities aimed at achieving shared objectives. For instance, addressing the burden of non-communicable diseases requires collaborative efforts across multiple sectors, involving institutions beyond the ministries of health. This includes the Ministry of Trade for regulating the marketing of unhealthy food and beverages, the Ministry of Finance for implementing taxes on unhealthy products, and the Ministry of Education for enhancing students' health literacy. These efforts should be accompanied by adequate mandates, funding, capacities and skills both within individual institutions and in coordination between them.

Given that health promotion and disease prevention are rooted in the principles of social justice and equity, it is imperative to enhance the regulatory framework to ensure that every individual, including community and social organizations, professional associations and academics, possesses the right and capacity to actively engage in decisions affecting their lives and communities. Empowerment, which lies at the core of all community-centred practices, should extend beyond mere empowerment to active participation in planning and decision–making processes [29]. These endeavours are crucial, as social relationships are recognized as significant determinants of health, and community involvement plays a pivotal role in fostering strong social ties in health promotion efforts [30, 31].

Planning and implementation

The active involvement in social decision making processes is integral to achieving good health, including in health burden prioritized to be addressed in the national strategic plan. Creating prioritization of the diseases as a part of the strategy, will help to focus on resolving health issues that need to be addressed urgently, especially in the setting of limited resources [32]. This study offered new methods in priority development by aligning data from different perspectives to scale the importance of the issues that need to be addressed. This prioritization helps the government to set the mid-term priorities for health development and arrange the financing scheme using a multi-stakeholder approach to achieve the targets. By establishing priority rankings, it is imperative to update data related to disease burden in Indonesia regularly. This updated information is vital for ensuring the effectiveness and efficiency of program planning and budget funding, as well as to remain aligned with the country's current health challenges and priorities. This prioritization not only guides health promotion directions but also

facilitates the monitoring and evaluation of health promotion targets.

The priorities come first from an academic, evidence-based assessment sourced from trusted databases, not only given from national political interests. Global directions for specific diseases need to be assessed to be locally appropriate to ensure that the measures taken are effective and efficient to tackle the national and local health burden. Lesson from Sustainable Development Goals (SDGs) adaptation to national and local context is that – despite the fact that nations have attempted to align the SDG indicators with existing laws, institutions and programs – many nations have been less adept at developing new integrated strategies for achieving the SDGs and in devising evaluation strategies [33]. They also lack mainstreaming and implementation of the SDGs based on their own institutional strengths and political styles. Indonesia, in particular, has a weaker system for coordinating implementation and reporting [34].

To effectively achieve the goals of health promotion and disease prevention, it is essential to ensure that all evidence-based health promotion activities are backed by robust capacity development of health promoters. The presence of health promoters – professionally trained healthcare workers specializing in health promotion – at primary care levels can bolster health promotion initiatives, particularly in many LMICs where they are currently predominantly supported by CHVs. Their responsibilities extend beyond program implementation to include informing and designing locally appropriate health promotion initiatives, strategizing, driving strategic change, and advocating for evidence-based approaches. Therefore, capacity building involving key stakeholders, such as the MoH, academia (both supporting and local tertiary institutions), health offices and primary health centres is imperative to achieve optimal health promotion and disease prevention outcomes.

Monitoring and evaluation

Furthermore, it is essential to establish robust monitoring and evaluation systems to continually assess the effectiveness of health promotion and disease prevention initiatives over time. Data-driven decision–making is a key strategy for refining strategies and achieving improved outcomes, as well as restructuring payment systems and utilizing health system financing to broaden the range of services within health systems and strengthen their collaborations with other stakeholders [13]. The strong monitoring system is also vital to support financing mechanisms for health promotion and disease prevention [35], a crucial aspect in the health system, alongside the highlighted 2030 SDGs targets and UHC [36].

Within the framework developed in this study, the financing mechanism for health promotion, as illustrated in Fig. 1, should align with three primary objectives: (a) expanding the scope of health promotion initiatives, (b) integrating funding resources, allocation, and expenditure reporting across sectors and (c) enhancing information systems to support monitoring and evaluation for providing comprehensive feedback to the overall health system financing. Expanding the scope entails countries maximizing efforts to extend beyond curative treatment programs and prioritize preventive actions by adequately addressing social determinants of health. Funding sources, whether from national, provincial or district levels, should complement each other. It is essential for these funding mechanisms to be flexible yet transparent, supported by a robust information system involving ministries, agencies and governments at all. These efforts, supported by the Health Law No 17/2023 and prospective President and Government regulations, will include data collection authorization, digital platform development and variable or data compatibilities between schemes, programs and agencies. With these improvements, the government can utilize the information for evidence-based decision–making to improve public health outcomes.

Study limitations

While we have conducted sampling across diverse regions based on criteria, such as local government fiscal capacity and disease burden, it is important to note that our study may not fully represent the needs and challenges across Indonesia, especially in remote areas. Therefore, the findings of this study cannot be universally applied, and additional interpretation is required for remote areas with limited resources.

Conclusions

This study comprehensively identified the gaps and challenges in implementation to inform the future direction of financing national health promotion. Despite having essential components to support the implementation and financing of health promotion and disease prevention, concerted efforts are required to enhance their effectiveness and efficiency, including the development of an integrated health financing information system. Integrating these components is essential for more impactful implementation. Future direction needs commitment and regular evaluation to ensure that financing is sufficient and sustainable.

Abbreviations

BOK	*Bantuan Operasional Kesehatan* (Supporting Operational Fund for Health)
CHV	Community health volunteer

DHO	District Health Office
FGD	Focused group discussion
GERMAS	*Gerakan Masyarakat Hidup Sehat* (Healthy Living Movement)
IDI	In-depth interview
LMICs	Low- and middle-income countries
MoH	Ministry of Health
NHA	National Health Account
PHC	Primary health centres
SIPK	*Sistem Informasi Pendanaan Kesehatan* (Health Financing Information System)
SDGs	Sustainable Development Goals
UHC	Universal Health Coverage

Supplementary Information

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Supplementary Material 1.

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Author contributions
A.F. conceived the original idea for the study and led the study implementation, analysis, reporting and article writing; M.A. and M.H. led data collection (interviews, discussions and online survey) and support the data analysis and reporting; A.A., A.S., M.A.H.N.H. and T.P. reviewed the protocol, did interviews, led focus group discussions and reviewed the manuscript; DK reviewed the analysis, report and manuscript. DAS, PBA and ISC supervised the project and reviewed the report and manuscript. All authors had full access to the data obtained from interview, discussions and open survey and had the final responsibility for the decision to submit for publication.

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Availability of data and materials
The data used in this publication are the property of the World Health Organization (WHO). The authors do not claim ownership of the data. Requests for access to the data for research or publication purposes should be directed to WHO. Data will be made available upon formal request, subject to approval by and in accordance with data sharing policies and procedures of the WHO.

Declarations

Ethics approval and consent to participate
We provided study explanations and asked for written consent from all potential participants prior to starting IDIs and FGDs and at the first page of the online questionnaire. This study received ethical approval (KET.1255/UN2.F1/ETIK/PPM.00.02/2022) from the ethics committee of the Faculty of Medicine, Universitas Indonesia – Cipto Mangunkusumo Hospital.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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