

## EVALUATION OF FREE HEALTH SCREENING PROGRAM IN INDONESIA: OPPORTUNITIES AND CHALLENGES IN EARLY DETECTION OF NON-COMMUNICABLE DISEASES

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### ABSTRAK

Prevalensi penyakit tidak menular di Indonesia terus meningkat. Sebagai bentuk pencegahan, pemerintah memperkenalkan program pemeriksaan kesehatan gratis (PKG) untuk meningkatkan deteksi dini penyakit. Tujuan dari artikel ini adalah untuk mengevaluasi pelaksanaan program pemeriksaan kesehatan gratis (PKG). Metode yang digunakan dalam penulisan artikel ini adalah tinjauan literatur. Program pemeriksaan kesehatan gratis terbukti efektif dalam meningkatkan kesadaran masyarakat untuk melakukan deteksi dini penyakit tidak menular. Hambatan dalam program ini masih ada seperti kurangnya kesadaran, ketakutan akan diagnosis, kendala ekonomi, dan rendahnya persepsi kebutuhan. Kegiatan deteksi dini penyakit berhasil meningkatkan pengetahuan masyarakat tentang penyakit tidak menular dan pentingnya deteksi dini. Program pemeriksaan kesehatan gratis (PKG) efektif dalam deteksi dini penyakit tidak menular di Indonesia, meskipun masih terdapat beberapa kendala. Hal ini dapat diatasi dengan kebijakan yang mengedepankan pendekatan berbasis masyarakat yang komprehensif.

**Kata kunci** : deteksi dini, indonesia, kebijakan kesehatan, penyakit tidak menular (PTM), skrining kesehatan

### ABSTRACT

*The burden of non-communicable diseases (NCDs) in Indonesia is rising, prompting the government to introduce the Free Health Screening Program (PKG) as a preventive effort. This article is a literature review based on studies published between 2018 and 2025, sourced from Google Scholar and PubMed, focusing on early detection of NCDs and the effectiveness of free health screening programs. The PKG program has shown positive outcomes in increasing public awareness and participation in early detection of NCDs. However, several challenges remain, including limited accessibility, low awareness, economic barriers, and preference for traditional medicine. The PKG program is effective in promoting early detection of NCDs in Indonesia. Its sustainability requires community-based strategies, enhanced health literacy, and equitable access to services.*

**Keywords** : early detection, health policy, health screening, indonesia, non-communicable diseases

### INTRODUCTION

Non-Communicable Diseases (NCDs), such as cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases, are the leading global causes of death, accounting for more than 70% of global mortality (WHO, 2020). These diseases share key modifiable behavioral risk factors, including tobacco use, unhealthy diets, physical inactivity, and excessive alcohol consumption, which contribute to obesity, high blood pressure, and elevated cholesterol levels. In developing countries, including Indonesia, NCDs pose an increasing public health challenge, as more than three-quarters of NCD-related deaths occur in low- and middle-income countries. Therefore, NCDs have been recognized as a strategic issue in the Sustainable Development Goals (SDGs) 2030 agenda and should be prioritized in national health development policies (Kemenkes RI, 2019). In Indonesia, the prevalence of NCDs continues to rise, with hypertension and diabetes being the most dominant conditions. According to the 2018 Basic

Health Research (Riskesdas), the prevalence of hypertension among the Indonesian population was 34.1%, while diabetes stood at 10.9%.

However, the 2023 Indonesia Health Survey (SKI) reported a slight decline in hypertension prevalence to 30.8%, whereas diabetes prevalence increased to 11.7%. Despite these figures, the rate of medical treatment-seeking behavior remains low. Data from Indonesian Health Survey 2023 indicates a significant gap between diagnosed cases and the number of individuals regularly seeking treatment or follow-up care. Among individuals aged 18-59 years with hypertension, those with central obesity were 3.4 times more likely to develop the condition compared to those without central obesity. Similarly, among diabetes patients in the same age group, central obesity increased the likelihood of the disease by threefold. Physical inactivity also emerged as a major risk factor, with hypertensive individuals aged 18-59 years being 1.9 times more likely to have the condition due to a sedentary lifestyle. In diabetic patients aged 60 years and older, the risk was 1.4 times higher for those who were physically inactive compared to those who were sufficiently active (Kemenkes RI, 2023).

To enhance early detection of NCDs, the Indonesian government introduced the Free Health Screening Program (PKG) (Ahmad, 2025). This initiative aims to improve early detection rates of hypertension, diabetes, and other NCDs while identifying key barriers in its implementation, such as healthcare accessibility, medical workforce capacity, and public awareness. However, many individuals are reluctant to undergo regular health check-ups, and a significant portion of the population remains unaware of their blood type. People tend to visit healthcare facilities only when they experience symptoms and often prefer traditional medicine over medical consultations. This reluctance has led to ineffective early detection efforts, highlighting the need for a more community-based approach to NCD prevention (Sukmana et al., 2020).

Despite the implementation of the Free Health Screening Program (PKG), there is limited evidence assessing its impact on NCDs early detection rates. Additionally, challenges in accessibility, healthcare infrastructure and public participation remain underexplored. These challenges, particularly the limited access to healthcare facilities, significantly hinder the early detection and treatment of non-communicable diseases (NCDs). According to (Siregar et al., 2025), several interrelated factors are geographical, economic, and policy-related affect the community's ability to reach healthcare centers such as community health center). Geographical barriers, including long distances and unpredictable weather conditions, are major obstacles. Although community health center (Puskesmas) offers affordable healthcare services, additional costs such as transportation expenses and other financial burdens still limit access for many individuals. Government policies on equitable distribution of healthcare facilities and medical professionals play a crucial role in improving public access to healthcare services (Siregar et al., 2025).

Given these challenges, this study aims to: (1) assess the effectiveness of the Free Health Screening Program (PKG) in enhancing early detection of NCDs in Indonesia; (2) identify primary challenges in implementing Free Health Screening Program (PKG), particularly regarding accessibility, healthcare workforce, and public awareness; (3) policy strategies to optimize the effectiveness of Free Health Screening Program (PKG) in reducing the burden of NCDs.

## METHOD

The method used in writing this article is Literature Review. A literature review is a scientific study that focuses on a particular topic. A literature review can provide an overview of the development of a particular topic. The stages of the literature review are 1) Finding

relevant literature, 2) Evaluating the source of the literature review, 3) Identifying themes, 4) Creating an outline structure, and 5) Compiling a literature review review.

Searching for article sources uses two databases, namely Google Scholar for national literature and PubMed for international literature. Literature searches are carried out using keywords to make it easier, such as health screening, non-communicable diseases, Indonesia, early detection, and health policy. In addition, there are also several criteria in the search process, namely literature that discusses early detection of non-communicable disease, effectiveness of free medical check-up program in improving early detection of NCD's, the main barriers to free medical check-up program implementation relate to accessibility, health workers, and community awareness, also strategies that can be implemented to optimize free medical check-up program effectiveness. To ensure that the data obtained is the latest data, this article uses publications in the last eight years since 2018 - 2025. Other criteria are that the article uses English or Indonesian and can be accessed for free. In addition, the citation and reference writing for this article uses the help of the Mendeley application.

## RESULT

The extraction results from the six (6) journal articles obtained with the specified keywords and topics can be seen in table 1.

**Table 1. Literature Extraction**

No.	Title	Author (Year)	Research Methodology	Result
1.	Free Health Check as an Effort Increasing Public Awareness of Early Detection Non-Communicable Diseases	(Sukmana et al., 2020)	Descriptive	Overall, the results of the health checks were quite good with an average of normal results. However, there were two participants with blood sugar results above 300 mg/dL. With this kind of activity, the community is becoming increasingly aware of the importance of periodic health tests for early detection of NCDs.
2.	Health Screening in the Community as an Effort Prevention of Non-Communicable Diseases	(Idayani et al., 2024)	Descriptive	The results of counseling and screening showed that the knowledge of the elderly increased to a better category, and the quality of health based on blood sugar and uric acid checks was mostly in the normal category. Based on these data, health counseling and screening activities have proven effective in improving the knowledge and health quality of the elderly.
3.	Pharmacy Lecturers Involvement in Basic Health Exams at Byel Farma Pharmacy as Part of Community Service	(Teodhora et al., 2024)	Descriptive	The health check-up program increased public understanding of preventive measures and healthy lifestyles. Hypertension was the most common health problem identified.
4.	Optimization of Early Detection of Hypertension and	(Nurhardianti & Sapriana, 2025)	Descriptive	The activity increased community awareness of early detection and prevention of non-

	Metabolic Diseases Through Free Health Check-ups and Health Education			communicable diseases. There was high community enthusiasm for participating in health check-ups and receiving health education.
5.	Early Detection of Risk Factors for Non-Communicable Diseases at Posyandu for the Elderly Lagarutu CPI 5 Talise Valangguni Palu	(Kunoli & Saleh, 2024)	Descriptive	The results of the early detection activity at <i>Posyandu</i> (Integrated Health Service Post) Lagarutu showed that 70% of the 40 elderly examined had moderate hypertension. Many of them also reported other health complaints, and blood serum examination showed levels exceeding the normal threshold, requiring further treatment. This activity was successful in improving the elderly's knowledge about non-communicable diseases and the importance of early detection, although there are still challenges in public awareness regarding NCD prevention.
6.	Free Health Check-Up Activity Program For Elderly Community As An Effort To Detect Early Non-Communicable Diseases	(Pramaswari & Fatah, 2023)	Descriptive	The free health check-up for the elderly attracted 42 participants out of a total of 90 elderly in the village, exceeding the minimum target of 20 people. This activity was conducted in conjunction with the elderly <i>posyandu</i> (Integrated Health Service Post) at the village hall and included blood pressure, blood sugar and uric acid checks. This activity shows that free health checks can increase elderly awareness of the importance of early detection of non-communicable diseases.

## DISCUSSION

### Effectiveness of PKG in Increasing Early Detection of NCDs in Indonesia

Non-communicable diseases (NCDs) are common diseases that affect people around the world. This is due to the high mortality and morbidity caused, so handling it is a challenge for the government and society. Non-communicable diseases (NCDs) are a type of disease that is not caused by infection with microorganisms such as protozoa, bacteria, fungi, or viruses. This disease cannot spread or be transmitted between individuals or from animals to humans. However, weak control of risk factors can lead to an increase in the number of cases every year (Siswanto & Lestari, 2020). Therefore, prevention efforts through early detection are very important. One effective effort is to conduct routine health checks, as seen in the Free Health Check (PKG) activities in Bertais Village. This PKG activity has proven to be effective in increasing community awareness of early detection of non - communicable disease (NCDs). This can be seen from the high community participation, increased enthusiasm for health checks, and success in identifying hyperglycemia cases that require follow-up (Sukmana et al., 2020).

In addition, the effectiveness of health screening activities in improving early detection of NCDs is also reinforced by the results of community service conducted by Idayani et al. (2024) in Banjar Kayangan, Denpasar. Through health counseling and screening activities for the elderly, there was a significant increase in knowledge about controlling sugar and uric acid. Pre-test and post-test results showed an increase in the category of good knowledge, and the results of health checks for most respondents were within normal limits. Training on the use of Point of Care Testing (POCT) tools also encouraged the community to conduct self-monitoring, thus strengthening early detection efforts at the community level. These findings suggest that health education and screening programs such as PKG can be an effective strategy in expanding the coverage of early detection of NCDs, increasing public health awareness, and reducing the number of complications due to non-communicable diseases (Idayani et al., 2024).

### **Primary Challenges in Implementing Free Health Screening Program (PKG)**

Free Health Screening Programs (PKG) stand as vital pillars in the landscape of public health, offering a proactive approach to early disease detection and fostering a culture of prevention, especially within communities that often face systemic disadvantages. Yet, the path to realizing the full potential of these initiatives is fraught with intricate challenges that can significantly undermine their efficacy. A fundamental obstacle lies in the realm of accessibility, where geographical barriers present formidable hurdles. For individuals residing in remote or rural areas, the scarcity of well-maintained road infrastructure and the paucity of reliable transportation options create a tangible divide between them and essential healthcare services, effectively isolating them from the reach of PKG initiatives (Teodhora et al., 2024). Beyond physical access, low public awareness and a deeply ingrained inclination to prioritize treatment over proactive health maintenance act as significant impediments to program participation. A considerable segment of the population may not fully grasp the long-term benefits of regular health check-ups, often only seeking medical attention when overt symptoms manifest, thereby missing the critical window for early intervention (WHO, 2021).

Furthermore, the effective implementation of PKG is often hampered by resource constraints, encompassing a shortage of adequately trained healthcare professionals, a lack of essential medical equipment, and limitations in available facilities, all of which restrict the scale and quality of services that can be provided. On the operational front, difficulties such as inflexible scheduling, the burden of lengthy waiting times, and the resultant participant fatigue can diminish the efficiency and overall appeal of these programs (BPJS Kesehatan, 2023). To truly amplify the impact and reach of PKG initiatives, a holistic and multifaceted strategy is indispensable. This strategy must place a strong emphasis on proactive community outreach efforts to bridge the gap in awareness and access, complemented by continuous and culturally sensitive health education campaigns to instill a greater appreciation for preventive care. Simultaneously, improvements in logistical planning and execution are crucial to streamline service delivery and minimize operational bottlenecks. Ultimately, a greater degree of responsiveness to the specific needs and contexts of local communities is paramount to ensure the long-term sustainability and effectiveness of these vital programs (Nurhardianti & Sapriana, 2025).

### **Policy Strategies to Optimize The Effectiveness of PKG in Reducing The Burden of NCDs**

Policy strategies that can increase the effectiveness of free health screening program (PKG) in reducing the burden of non-communicable diseases (NCDs) include a comprehensive and community-based preventive approach. (Kunoli & Saleh, 2024) prioritize the importance of early detection conducted routinely at *Posbindu lansia* (Integrated Health Post for Older Adults), including measurement of blood pressure, blood sugar, body mass index, and risk interviews. This is followed by education on healthy lifestyles to change risky behaviors early



on and increase the community's collective awareness of the importance of preventive health. The effectiveness of PKG is further enhanced by empowering the community to monitor their own health. In a study (Pramaswari & Fatah, 2023) highlighted the collaborative role between health students, village midwives, and *Posyandu* (Integrated Health Service Post) cadres in the implementation of blood pressure, blood sugar, and uric acid checks, which not only serve as early detection, but also as an educational medium to strengthen the elderly's understanding of the importance of regular check-ups.

Effective PKG implementation also relies heavily on effective methods of engagement with local community conditions. (Nurhardianti & Sapriana, 2025) showed that PKG implementation accompanied by interactive counseling was able to increase participants' enthusiasm and understanding of the importance of regular check-ups. Of the 89 participants who attended their activities, most stated that they would implement a healthy lifestyle and routinely conduct health checks. The strategy of implementing the program at night, utilizing educational media, and involving village officials proved to be the main supporting factors for the success of the program. The results of the activity evaluation showed that 90% of participants experienced increased awareness about preventive health and 80% of participants planned to conduct routine check-ups after participating in this activity. This indicates that the accessibility of flexible time and adaptive educational approaches can expand the reach of preventive health services, especially in areas with limited access to health services (Nurhardianti & Sapriana, 2025).

The success of PKG in reducing the number of NCDs depends on the integration of continuous health education, community-based early detection services, active participation of health cadres, and cross-sectoral policy support oriented towards prevention, collaboration, and comprehensive community empowerment. The implementation of the Healthy Living Community Movement (*GERMAS*) has also expanded promotional coverage through physical activity, consumption of balanced nutrition, and routine health checks, which are integrated with *Posbindu* activities and community interventions (Pramaswari & Fatah, 2023). Thus, PKG is not only a means to detect diseases early, but also serves as a collective movement to increase awareness and change healthy living behaviors at all levels of society (Nurhardianti & Sapriana, 2025). This suggests that PKG has strong promotive and preventive value, not only addressing disease, but also educating the community to change lifestyles. This finding is reinforced by research by (Arifuddin et al., 2025) who conducted free health check-up activities. In this activity, participants received blood pressure, blood glucose, and uric acid checks, as well as direct education about the importance of maintaining health. The education provided was able to increase their awareness to routinely conduct examinations and maintain a healthy lifestyle (Arifuddin et al., 2025).

Both studies show that PKG is effective in increasing community health awareness. (Nurhardianti & Sapriana, 2025) emphasized a broad community-based approach, while (Arifuddin et al., 2025) focused on direct and measurable local interventions. Both highlight the importance of cross-sector collaboration for sustainable healthy behavior change. The success of PKG depends on program sustainability, community involvement, and consistent education. Therefore, PKG should be part of a long-term strategy to prevent non-communicable diseases.

## CONCLUSION

The Free Health Screening Program (PKG) has shown to be an effective initiative in enhancing early detection of non-communicable diseases (NCDs) in Indonesia, as reflected in increased community participation and the use of Point of Care Testing (PoCT) tools that support community-level detection efforts. However, its implementation continues to face

significant challenges, particularly low public awareness, limited health literacy, and the persistent preference for traditional medicine, which reduce program uptake and long-term impact. To improve its effectiveness, PKG should adopt a comprehensive, community-based preventive strategy involving collaboration with local health cadres, students, and integrated health posts in conducting regular screenings. Policy support must also prioritize targeted health education, improved access in remote areas, and incentives for preventive participation.

In the long term, the sustainability and impact of PKG depend on regular program evaluation, integration with broader primary health care systems, and cross-sectoral coordination involving education, community development, and digital health infrastructure. Strengthening these dimensions is essential for reducing the NCD burden and advancing equitable health outcomes in Indonesia.

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