

Towards a Structured Obesity Policy in Indonesia: Lessons from the Implementation of Metabo Law in Japan

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ABSTRACT

Obesity is a growing global public health challenge, especially in developing countries. In Indonesia, the prevalence of adult obesity has reached 23.4%, but the control policy remains limited to a promotive-preventive approach without binding regulations. In contrast, Japan implements a Metabo Law policy that combines mandatory screening, clear anthropometric parameters, and a health insurance-based institutional incentive system. This research aims to analyze the success of the Metabo Law policy in Japan and evaluate its potential adoption or adaptation in the context of Indonesia and other developing countries. This research used a qualitative literature review approach by examining obesity policies in Japan, India, Thailand, the Philippines, Brazil, and Indonesia. The analysis was carried out thematically based on scope, intervention mechanisms, financing, institutional structure, and socio-cultural context. The Metabo Law succeeded in reducing the prevalence of metabolic syndrome through a regulative and population-based approach. Compared to developing countries, Japan's policies excel in terms of national coverage, institutional accountability, and funding sustainability. However, the success of the Metabo Law was greatly influenced by the context of Japanese collectivism and an integrated national health system, which are not yet fully present in developing countries. The adoption of policies such as the Metabo Law needs to be contextually adjusted. Indonesia can draw inspiration from such policy structures and mechanisms, especially in building a national screening system, strengthening regulations, and developing institutional incentives.

KEYWORDS Obesity, Metabo Law, health policy, policy comparison, Indonesia, Japan



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INTRODUCTION

Obesity has become one of the most significant public health challenges globally in the last two decades. According to the World Health Organization (WHO), the prevalence of obesity worldwide has nearly tripled since 1975, with the fastest increases occurring in low- and middle-income countries. This condition not only has consequences for individual health but also burdens the health care system and increases state spending in the health sector (Irma Yunawati et al., 2025; Sunanda Putra et al., 2023). In Indonesia, Basic Health Research (RISKESDAS) data show that the prevalence of obesity in the adult population (>18 years) increased from 14.8% in 2013 to 21.8% in 2018 and continues to increase to 23.4% based on data from the Indonesian Health Survey (SKI) in 2023. This surge in numbers directly impacts

the increasing incidence of non-communicable diseases (NCDs) such as type 2 diabetes mellitus, hypertension, heart disease, and stroke, most of which afflict the productive age group. This impact not only leads to a decrease in quality of life and productivity but also increases the country's economic burden due to the cost of long-term treatment, especially for catastrophic diseases that require lifelong care (Budyono et al., 2022).

This situation shows the urgency of the need for systemic and targeted obesity control. Unfortunately, most developing countries, including Indonesia, do not yet have national policies that explicitly and comprehensively target obesity as a major risk factor. Existing policies are generally still promotive-preventive without binding regulatory components and tend to be fragmented between sectors. The interventions carried out are more in the form of educational campaigns, such as the promotion of balanced nutrition and the encouragement of physical activity, in the absence of systematic population screening programs or individually targeted lifestyle interventions. Furthermore, obesity is often seen as a secondary problem of NCDs rather than the root of the problem requiring its own treatment (Kusnadi et al., 2022; Mane et al., 2024; Scott et al., 2022; Thakur et al., 2020).

In this context, the Metabo Law policy implemented in Japan since 2008 offers an interesting model of intervention to analyze. The Metabo Law is a population-based health policy with an approach that combines mandatory annual screening, clear anthropometric boundaries, and structured lifestyle interventions. This policy requires the measurement of waist circumference as an indicator of visceral obesity for citizens aged 40–74 years, financed by the national health insurance system. Individuals identified as exceeding the threshold undergo counseling and personalized lifestyle modification programs. In addition, the policy emphasizes institutional responsibility through a reward and punishment system for companies and insurance providers: incentives are given to institutions that achieve health targets, while financial sanctions are imposed on those that fail to meet standards. The evaluation of this policy shows a positive impact, both in reducing the prevalence of metabolic syndrome and lowering the long-term costs of the health system, making it one of the real examples of the success of regulation-based preventive health policies.

Japan's success in controlling obesity through a structured and long-term oriented policy approach raises an important question: can models like the Metabo Law be adopted, adapted, or used as inspiration for developing countries like Indonesia? Given differences in health systems, resources, organizational culture, and institutional dynamics, cross-border policy adoption requires critical study that considers contextual factors in depth. On the other hand, the urgency of the need for a new approach to controlling obesity in developing countries encourages exploration of various international policies that have proven effective (Nakao et al., 2018).

The novelty of this study lies in the cross-country comparative analysis between Japan and Indonesia in the area of regulation-based obesity control, which is still rare in health policy literature in Southeast Asia. Most existing studies focus on clinical aspects or general health promotion without delving into the structural and regulatory mechanisms of a binding policy

like the Metabo Law and its potential adaptation in a different socio-cultural and health system context.

Therefore, this article aims to conduct a comparative study of obesity control policies between Japan and Indonesia, using the Metabo Law as the main case study. Using a literature review approach, this article will analyze the factors for the successful implementation of the Metabo Law in Japan and evaluate the opportunities and challenges of its adoption in the context of developing countries, especially Indonesia. Through this analysis, it is hoped that relevant and realistic policy recommendations can be obtained to support obesity control efforts in a more effective and integrated manner.

METHOD

This article used a qualitative literature review approach to examine obesity control policies, focusing on the analysis of the Metabo Law policy in Japan and its potential adoption or adaptation in developing countries, particularly Indonesia. This approach was chosen because it allowed for an in-depth exploration of implemented policies across countries without the need for primary data collection, while providing a strong empirical basis for comparative analysis.

The literature reviewed included national policy documents from the governments of Japan and Indonesia related to obesity and non-communicable disease control, scientific publications and policy evaluation reports from peer-reviewed journals, as well as reports and technical guidelines from international organizations such as WHO, OECD, and the World Bank. Articles and reports from national public policy institutions and civil society organizations were also used as sources.

The review process followed three main stages: First, identifying and selecting literature based on topic relevance, source credibility, and data currency. Second, extracting key data on policy characteristics, implementation mechanisms, and empirical evaluation results. Third, synthesizing findings through thematic analysis, grouping information into categories including policy mandate and scope, screening and intervention mechanisms, institutional incentive and sanction systems, program financing and sustainability, and socio-cultural and institutional factors influencing implementation.

Although based only on secondary literature, the use of diverse and credible sources provided a comprehensive overview of the Metabo Law's effectiveness and the potential challenges of its adaptation in developing country contexts.

RESULT AND DISCUSSION

Empirical Evaluation of Metabo Law in Japan

The Japanese government through the Ministry of Health, Labor, and Welfare began implementing a national policy called the Metabo Law in 2008 in response to the high prevalence of metabolic syndrome and obesity among the productive to elderly population. This policy requires annual health checks for all citizens aged 40 to 74 who are covered by various national health insurance schemes, including Employee Health Insurance, National Health Analysis of Prophylactic Antibiotic Administration in Obstetrics, Gynecology, Orthopedics, and Gastrointestinal Surgery at Pondok Indah Bintaro Jaya Hospital January-March 2024

Insurance, and insurance for the elderly. One of the key elements of this examination is waist circumference measurements, which are used as a key indicator in identifying the risk of metabolic syndrome. The scope of the program is extraordinarily broad, touching nearly 50 million of Japan's population, making it one of the largest population health interventions focused specifically on abdominal obesity and metabolic disorders. (ITO Yukiko et al., 2017; Meidhita Irsantri & Purba, 2024)

In its implementation, the government sets a waist circumference threshold of 85 cm for men and 90 cm for women. Individuals who exceed this threshold are classified as risk groups and are required to attend a lifestyle change counseling program. The program focuses on dietary modification and increased physical activity, and includes consultation sessions with healthcare workers, regular monitoring by phone or email, and ongoing motivational support. This intervention model combines educational and behavioristic approaches to facilitate long-term changes in daily living habits. This approach was chosen because it is considered more sustainable than direct medical interventions such as pharmacotherapy or surgery. (ITO Yukiko et al., 2017)

One of the aspects that distinguishes the Metabo Law from other obesity control policies is the application of a reward and punishment system that is not aimed at individuals, but at institutions responsible for health insurance. The government awards "Health and Productivity Management" certificates to companies that successfully maintain employee health and achieve program targets, which provide reputational benefits and added value in the context of corporate social responsibility. Conversely, if the participation rate in the annual examination does not reach 65%, or if there is no 25% decrease in the number of metabolic syndrome cases until 2012, then institutions such as insurance companies or local governments will be sanctioned in the form of fines or an increase in contributions of up to 10% to the national insurance fund for the elderly. In some cases, as happened to large companies NEC, potential fines can reach up to \$19 million if targets are not met. This mechanism creates systemic pressure for institutions to invest more seriously in health prevention and promotion efforts.

Evaluation of the implementation results shows a significant impact in the medium term. In the first five years of implementation, the prevalence of metabolic syndrome nationally reported a decrease of 11.6%, based on official data from the Ministry of Health of Japan (2013). A study by Ohta et al. (2014) also confirmed that participants who followed the counseling program showed significant reductions in blood glucose and triglyceride levels, two key indicators in metabolic syndrome. The government has set an ambitious target of reducing the proportion of overweight and obese people by 10% in 2012 and 25% in 2015, with results showing a positive trend although not evenly distributed across the region. (Nakao et al., 2018)

However, the implementation of this policy is inseparable from criticism and challenges. Its long-term effectiveness is still debated, mainly due to the achievement gap between regions and the potential for social stigma against individuals with obesity. Some research highlights that institutional pressure on insurance companies can lead to overly technocratic approaches and ignore the psychosocial aspects of obesity. In addition, this policy is not accompanied by

criminal penalties or direct sanctions on individuals, so its effectiveness is highly dependent on the collective motivation and capacity of the institution to implement the program. Japan's strong culture of collectivism and a legal system that supports the public interest play an important role in ensuring the sustainability of this policy.

Interestingly, in its application, there are specific exceptions that reflect cultural and professional sensitivities, such as sumo athletes who are not required to follow waist circumference measurement standards. This exception demonstrates policy flexibility that takes into account the social and traditional context of Japan, although it still raises questions about the consistency of the basic principles of population health intervention.

Overall, the Metabo Law reflects a systemic approach to the control of obesity and population-based metabolic syndrome that emphasizes prevention, intersectoral integration, as well as institutional incentives. Although not spared criticism, this policy is one of the important empirical studies that can be a reference for other countries, including Indonesia, in designing comprehensive and regulation-based obesity control policies. This policy also marks a form of innovation in a national-scale preventive approach that brings together measurable mandates, evidence-based interventions, and institutional behavior strengthening systems through incentive and disincentive mechanisms. With these characteristics, the Metabo Law is considered a progressive public health policy model, where regulations are not only normative, but also capable of driving real change through collective responsibility and structural pressure on insurance institutions and companies.

Comparative Study: Obesity Control Policies in Developing Countries

Various developing countries have policies and programs with the aim of preventing NCDs. Obesity screening is one of the examinations in various programs as one of the risk factors for NCDs. The following is a description of obesity policy strategies from several developing countries, compiled to provide a comparison to the Metabo Law approach.

a. India

The Government of India launched the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) in 2010 in response to the increasing burden of non-communicable diseases (NCDs) such as cancer, diabetes, cardiovascular diseases and stroke. NCDs now account for about 60% of all deaths in India, leading to a significant loss of productive years and rising healthcare costs. (Mane et al., 2024; Pimple & Mishra, 2023; Thakur et al., 2020) The program aims to address the transition from infectious to non-communicable diseases as a major health challenge in the country. Through the NPCDCS, the Indian government launched a community-based health education and promotion strategy. The program sets a set of interrelated goals that aim to reduce the prevalence and impact of general NCDs through a comprehensive public health approach. (Thakur et al., 2020)

First and foremost, NPCDCS seeks to prevent and control the occurrence of major NCDs by promoting behavioral and lifestyle changes among the population. This involves

encouraging healthier eating habits, increased physical activity, cessation of tobacco and alcohol use, and other modifications that reduce individual and community-level risk factors. Prevention strategies are an integral part of the program's vision, recognizing that long-term reductions in NCD prevalence are best achieved through sustained behavioral change and a supportive environment. (Krishnan et al., 2011)

Second, the program emphasizes the importance of early diagnosis and timely management of NCDs. By integrating routine check-ups and risk assessments into primary health services, NPCDCS aims to detect diseases such as diabetes, hypertension, and certain cancers at an early stage, when interventions are more effective and less resource-intensive. Early detection is positioned as an important step in stopping the progression of the disease and preventing complications. (Krishnan et al., 2011)

The third core goal is to strengthen the capacity of healthcare systems at all levels to effectively prevent, diagnose, and manage NCDs. This includes developing infrastructure, ensuring the availability of essential medicines and diagnostic equipment, and improving referral systems. Capacity building extends to urban and rural settings, aiming to ensure equitable access to quality NCD care across diverse populations. (Agarwal et al., 2023)

In parallel, the NPCDCS prioritizes training and upskilling of human resources—including doctors, nurses, and paramedical staff—to address complex and evolving NCD care needs. Through structured training programs, continuing medical education, and practical skills development, the program seeks to create a competent and responsive health workforce capable of providing integrated NCD services. (Agarwal et al., 2023; Krishnan et al., 2021; Mane et al., 2024)

Finally, the NPCDCS recognizes the need for long-term care and support for individuals living with chronic NCDs by establishing and expanding palliative and rehabilitative care services. These services are important for improving the quality of life of patients, especially those in advanced stages of the disease, and are seen as a key component of comprehensive NCD management. (Jiang et al., 2025)

Overall, these goals reflect a holistic approach to NCD prevention and control, addressing the entire range of care from health promotion and disease prevention to treatment, rehabilitation, and palliative care.

To translate its goals into actionable outcomes, NPCDCS uses a set of targeted strategies designed to address the diverse nature of NCD prevention and control. This strategy operates across the spectrum of public health interventions—from health promotion to integrated service delivery—and is at the core of the program's implementation framework.

Health promotion and prevention are the cornerstones of NPCDCS interventions, with a strong emphasis on encouraging individuals and communities to adopt healthier lifestyles. The program seeks to reduce modifiable risk factors such as unhealthy diet, tobacco use, lack of physical activity, and harmful alcohol consumption through public awareness campaigns, school-based education, and community outreach initiatives. These efforts aim to create a

supportive environment that empowers individuals to make informed health choices and facilitates sustainable behavior change. (Abdel-All et al., 2019a)

In addition, early diagnosis is pursued through an opportunistic and population-based screening approach. Screening services for diabetes, hypertension, and general cancers—specifically oral, breast, and cervical cancer—are available to all individuals age 30 and older. These efforts are integrated into routine service delivery at the primary health care level, ensuring that high-risk individuals are identified and addressed promptly. By detecting NCDs in the early or asymptomatic stages, the program increases the potential for effective interventions and better outcomes for patients. (Abdel-All et al., 2019b; Shukla et al., 2023)

NPCDCS also prioritizes care and case management at various levels of the healthcare system. Specialized PTM clinics in district hospitals and community health centers offer free diagnostic services and essential medicines to ensure continuity of care. Standard care protocols are followed to effectively manage cases at the primary and secondary levels, with timely referrals to tertiary care facilities if specialized interventions are required. This structured approach to case management helps reduce the complications, hospitalizations, and premature death associated with NCDs. (Krishnan et al., 2021; Sharma et al., 2022)

Capacity building is another strategic focus, which includes the development of physical infrastructure, the provision of diagnostic equipment, and the training of health workers. The program invests in strengthening the health system's ability to deliver high-quality NCD services by improving workforce competencies and building robust systems for surveillance, monitoring, and evaluation. This ensures accountability, data-driven decision-making, and continuous quality improvement in service delivery. (Abdel-All et al., 2019a; Birje et al., 2022; Mane et al., 2024)

The NPCDCS underscores the importance of integration by embedding NCD services within existing primary healthcare frameworks. This approach not only drives operational efficiency but also strengthens the continuity of care, allowing individuals to access comprehensive services—from prevention to palliative—in an integrated health system. Integration facilitates better utilization of resources, minimizes duplication of effort, and strengthens relationships between different levels of care. (Krishnan et al., 2021)

Collectively, these strategies reinforce the program's commitment to providing equitable, accessible, and holistic NCD care, while advancing national health goals and contributing to global targets for NCD reduction.

In conclusion, NPCDCS is an integrated and comprehensive approach in India to address the NCD epidemic through prevention, early detection, and improved management at all levels of the health system. Although it includes NCD risk detection, its scope is still limited in urban areas and has not been integrated with incentive systems or regulations.

b. Thailand

Thailand implements a tax on sweetened beverages and a national campaign on balanced nutrition. Under the ThaiHealth Promotion Foundation, the country is demonstrating a tax-based funding model for preventive programs. The ThaiHealth Promotion Foundation is a

pioneering autonomous public organization that has significantly advanced health promotion and prevention (NCD) in Thailand. Established under the Health Promotion Act of 2001, ThaiHealth is designed as a structural innovation to sustainably address the determinants of behavioral and social health, particularly those that contribute to the increasing burden of NCDs, including obesity. (Pongutta et al., 2019)

One of the most distinctive features of ThaiHealth lies in its funding mechanism. Unlike traditional public health institutions that rely on annual government budget allocations, ThaiHealth is financed through a special additional excise tax of 2% for tobacco and alcohol products. These allocated revenue streams provide a stable and independent source of funding, allowing the foundation to run long-term, flexible, and strategic health promotion initiatives. The financial autonomy provided by this model has been instrumental in enabling ThaiHealth to maintain consistency in programming while avoiding the limitations of budget fluctuations. (Pongutta et al., 2019; Tipayalai & Subchavaroj, 2025)

ThaiHealth's mandate is centered on improving health and well-being through a broad and integrated approach that combines evidence-based interventions, policy advocacy, social mobilization, and capacity building. ThaiHealth serves as an innovative driver and catalyst, facilitating multisectoral collaboration between government agencies, civil society organizations, academic institutions, and the private sector. Through this model, ThaiHealth has positioned itself not only as a funder but also as a strategic driver of national health promotion. (Chanpitakkul et al., 2024; Pongutta et al., 2019)

In terms of focus areas, ThaiHealth focuses its efforts on the main behavioral risk factors that contribute to NCDs, including tobacco use, harmful alcohol consumption, unhealthy diets, lack of physical activity, and obesity. ThaiHealth funds and coordinates various initiatives such as public awareness campaigns, media engagement, research, and community-based interventions. These activities are designed to foster a healthy environment and support sustainable lifestyle changes across populations. (Kasemsup et al., 2020)

Several flagship initiatives illustrate ThaiHealth's impact on obesity prevention and related policy advocacy. For example, the institute played an important role in supporting the "Ban Soda in Schools" policy, which limited the availability of sugary sweetened beverages (SSBs) in educational settings to combat childhood obesity. Another important campaign is the "Fatless Belly Thais" (FBT) initiative, which promotes healthy eating, regular physical activity, and emotional well-being. Furthermore, ThaiHealth has provided technical support and advocacy for the development and implementation of the Sugary Sweet Beverage Tax, which aims to curb excessive sugar consumption through fiscal policy measures. (Cancello et al., 2024; Kanchanachitra & Angeles, 2023; Phulkard et al., 2021)

ThaiHealth's governance structure further supports its success. The foundation is overseen by a board of trustees made up of representatives from government, academia, and civil society, which ensures a diverse perspective and broad-based accountability. The foundation actively fosters cross-sectoral and governance-level partnerships, leveraging collaborative networks such as the Sweet Enough Network (SEN) to drive innovation and

policy implementation at the national and community levels. (López-Daza et al., 2025; Wittekind et al., 2018)

An integral part of ThaiHealth's approach is its commitment to generating and monitoring evidence. The foundation invests heavily in research, monitoring, and evaluation to inform policy development and program design. This evidence-based orientation allows for adaptive management and continuous improvement of health promotion interventions, while contributing to a national knowledge base about health behaviors and outcomes. (Colin-Jones & Murthy, 2021; López-Daza et al., 2025; Wittekind et al., 2018)

In summary, ThaiHealth stands as a globally recognized model for the financing, governance, and implementation of innovative health promotion programs. Its establishment allows Thailand to overcome a range of common barriers in NCD control—such as fragmented efforts, short-term planning, and unstable funding—thereby enabling the continued advancement of national health goals. By integrating fiscal policy, strategic partnerships, and evidence-based practices, ThaiHealth exemplifies how institutional design can effectively support large-scale disease promotion and disease prevention efforts, particularly in the domains of obesity and NCD risk factor reduction. (Bestle et al., 2020; Sapparojpattana, 2020)

c. Philippines

The Healthy Lifestyle Program in the Philippines is a government-led initiative designed to prevent and control NCDs by promoting healthy behaviors and encouraging lifestyle changes at both the community level and primary health services. The program targets education and promotion in the workplace, school, and community. The rise of NCDs such as cardiovascular disease, diabetes, cancer, and chronic respiratory diseases has added to the burden on the country's health system, with these conditions ranking among the leading causes of death and disability. In response to this growing crisis, the program reflects a strategic shift in national health policy—from a model that has historically focused on healing and treatment—to a more preventive approach, as embodied by recent reforms such as the Universal Health Care Act. (Bautista et al., 2022; Capeding et al., 2021; Estacio et al., 2020; Niria-Maritana et al., 2021; Nisperos & Ornos, 2022)

Launched in 2003, the Healthy Lifestyle Program has evolved to incorporate up-to-date scientific evidence and address contemporary health challenges, while maintaining its fundamental emphasis on prevention. At the heart of the program is a community-based approach that embeds health promotion into local governance and daily life. By encouraging provinces and municipalities to establish and manage their own healthy lifestyle initiatives, the program encourages community ownership and ensures that interventions are contextual. This decentralized implementation is supported by the Ministry of Health and coordinated with academic institutions such as the University of the Philippines, along with international partners including the WHO. (Manez, 2020; Palma et al., 2025)

An important component of the program is the capacity building of health professionals at the forefront of care. Doctors, nurses, midwives, and nutritionists receive targeted training on the promotion of healthy living, covering important topics such as risk factor assessment,

nutrition and weight management, physical activity, tobacco and alcohol control, and stress reduction. In addition to clinical knowledge, the training emphasizes communication, health education, social mobilization, and the use of media to effectively disseminate health information and influence public attitudes. (Palma et al., 2025)

The program explicitly targets modifiable lifestyle risk factors that contribute to the NCD epidemic. Unhealthy diets, sedentary behaviors, tobacco use, harmful alcohol consumption, and unmanaged stress were identified as priority areas for intervention. Through behavior change communication strategies, supportive community environments, and health promotion campaigns, the program seeks to reduce the prevalence of these risk factors. Community events, physical activity initiatives, nutrition education, anti-smoking movements, and mental health awareness activities are integral parts of its reach. (Candelario, 2023; Gabiola et al., 2020)

Most importantly, the Healthy Lifestyle Program is not implemented in isolation, but in line with broader national strategies and policies. The program supports and complements the goals of the Philippine Coalition for the Prevention and Control of NCDs, the Department of Health's Strategic Action Plan for NCDs (2017–2025), and other related initiatives such as tobacco control laws, alcohol taxation measures, a national nutrition framework, and the Package of Essential Non-Communicable Disease Interventions (PhilPEN). This policy coherence allows the program to strengthen ongoing efforts and contribute to an integrated national response to NCDs. (Haregu et al., 2023; Molon, 2025; Pascual et al., 2025; Stuart et al., 2019).

Health promotion and public advocacy are also the center of program implementation. Various communication tools—brochures, posters, mass media releases, and social media—are used to raise public awareness and encourage the adoption of healthy lifestyles. These efforts are complemented by grassroots mobilization, which allows local leaders and health workers to act as well-being warriors in their communities. (Candelario, 2023)

By focusing on primary and primordial prevention, the Healthy Lifestyle Program not only aims to treat existing health conditions but also to reduce the incidence of NCDs by addressing the root cause early and throughout the population. Its long-standing, national-scale, and integration into local health systems make it the cornerstone of the Philippines' approach to sustainable NCD prevention. Through its emphasis on community engagement, capacity building, and evidence-based practices, the program continues to play a critical role in shaping a healthier future for the Filipino population. (Candelario, 2023; Gabiola et al., 2020; Manez, 2020; Palma et al., 2025)

d. Brazil

Brazil stands out with its Programa Academia da Saúde that integrates community facilities for physical activity and counseling. This approach is based on community participation but does not have a national screening system based on anthropometric measurements. Launched in 2011 by the Brazilian Ministry of Health, the Programa Academia da Saúde (PAS) is a national strategy that aims to promote comprehensive health and care within the framework of Brazil's Integrated Health System (SUS). The initiative seeks to improve

public health and improve the quality of life by building community-based spaces, known as polos, that offer a range of services focused on developing healthy lifestyles. The polo is a public facility equipped with infrastructure, materials, and trained professionals, strategically designed to serve as a center for public health promotion activities. The facility operates in coordination with Brazil's broader primary health care network, including the Family Health Strategy and Health Surveillance system, thus ensuring an integrated approach to public health. (da Guarda et al., 2021; de Paiva Neto et al., 2019; Reis et al., 2021)

Although PAS was initially inspired by local initiatives centered on physical activity, the program has evolved into a multidimensional health promotion program. The concept is based on a comprehensive understanding of health that goes beyond just exercise, which includes healthy eating, integrative and complementary health practices, cultural and artistic engagement, health education, community mobilization, and the development of a healthy environment. This broad framework is operationalized through a series of eight thematic axes that guide program activities: physical activity and body practice; production of healthy care and lifestyle; promotion of healthy eating; integrative and complementary health practices; arts and cultural activities; health education; community mobilization; and planning and management. These components are intended not only to improve individual behavior but also to reinforce social and environmental conditions that support sustainable health improvement. (Reis et al., 2021; Silva et al., 2023)

The goals of PAS reflect its holistic and cross-sectoral orientation. The program aims to strengthen health promotion as a fundamental public health strategy and to develop comprehensive care pathways that respond to a wide range of societal needs. As such, the program promotes collaborative action across a variety of sectors—health, education, culture, social assistance, sports, and recreation—thereby recognizing the various determinants of health. The main goal is to increase physical activity and improve eating habits among the population, especially in underserved areas. The program also emphasizes the importance of community engagement, intergenerational dialogue, and recognition of local territorial contexts in designing and implementing interventions. By encouraging community participation and strengthening social support networks, PAS helps build a more resilient and health-literate society. (da Guarda et al., 2021; de Paiva Neto et al., 2019; Reis et al., 2021)

The governance and implementation of the program is overseen by the municipal and district health secretariats, with additional support provided by the state health department. The Ministry of Health offers technical guidance, allocates financial resources, and provides tools for monitoring and evaluation. The integration of PAS in the broader primary health care system ensures alignment with national health priorities and increases the reach and impact of the program. Recent reports show that hundreds of polo are operating throughout Brazil, providing a wide variety of health promotion activities for different populations. The program has gained recognition as a successful public health intervention that expands access to health promotion and supports the prevention and control of chronic diseases through community-based cross-sectoral strategies. (da Guarda et al., 2021; de Paiva Neto et al., 2019; Meurer et al., 2020)

Programa Academia da Saúde is a comprehensive, community-centered health promotion initiative that integrates physical activity with broader social, cultural, and health education actions to improve the health and well-being of communities across Brazil.

e. Indonesia

Obesity has become a significant public health problem in Indonesia, with an increasing prevalence. Based on RISKESDAS 2018 data, the prevalence of obesity in adults in Indonesia reaches 21.8% and tends to increase. In response to this, the Indonesian government has adopted a comprehensive range of policies and programs, including promotive, preventive, and management approaches to obesity cases medically and non-medically, as well as involving cross-sectors and communities. (Eka Putri et al., 2025; National Riskesdas Report 2018)

One of the main policies is the Healthy Living Community Movement (GERMAS) which was launched through Presidential Instruction No. 1 of 2017, which encourages people to cultivate a healthy lifestyle, such as doing physical activity for at least 30 minutes per day, consuming fruits and vegetables, and increasing education about a healthy lifestyle. In addition, the regulation of sugar, salt, and fat content (GGL) in processed foods is also regulated through a ministerial regulation that requires the inclusion of nutrition labels, so that people are more aware of the nutritional content in food products.

In order to improve people's diets, the government also launched the "Isi Piringku" program which replaces the old paradigm of "4 Healthy 5 Perfect". The program emphasizes the importance of a balanced portion of food, which is 50% fruits and vegetables and 50% carbohydrates and proteins, while limiting the consumption of GGL. In line with that, efforts to suppress the consumption of high-sugar drinks are also carried out through the discourse on the application of excise on packaged sweetened beverages (MBDK), which is encouraged by various institutions such as CISDI. Another movement that has strengthened this effort is GENTAS (Nusantara Movement to Reduce Obesity Rates), which invites people to regulate their diet and actively move regularly. (Kusnadi et al., 2022; Scott, et al., 2022).

Obesity prevention and control strategies are carried out with an approach that distinguishes between healthy populations and obese populations. For healthy populations, the strategy includes promoting an environment that supports physical activity, education on a balanced diet, early detection of obesity through Posbindu PTM and measurement tools such as the Obesity Carta, as well as counseling and referrals when needed. Meanwhile, in the obese population, management is carried out medically and non-medically through diet, exercise, behavior modification, and therapy programs tailored to individual needs in health facilities. Campaigns such as "Isi Piringku" are also strengthened by education on healthy snack consumption in schools through the GERMAS SAPA program, which involves teachers and canteen staff as nutrition education agents. (Eka Putri et al., 2025; Scott, et al., 2022).

To ensure the effectiveness of policies, the government continues to monitor and evaluate through various instruments such as RPJMN, GERMAS, SPM, Strategic Plan, and RAN PTM. The national target set includes reducing the prevalence of obesity in the population over the age of 18 years to 21.8% in the 2022–2024 period. This is in line with the global target of non-

communicable disease control (NCDs), which is to contain the rate of increase in obesity by 0%. However, a number of challenges still need to be overcome, such as low public awareness of the dangers of obesity, obesogenic environmental conditions due to easy access to high-sugar foods, weak cross-sector support, and the impact of urbanization that drives a shift from traditional diets to modern diets that are less healthy (Scott, et al., 2022).

Overall, obesity control policies in Indonesia are comprehensive, including food regulations, healthy lifestyle promotion, nutrition education, supervision of the food industry, and interventions involving medical services and community empowerment. The implementation of this policy continues to be strengthened with a cross-sectoral approach, continuous education, and innovations such as the implementation of excise duty on sweetened beverages to reduce sugar consumption. However, changing people's behavior and creating an environment that supports healthy living remains the main key that must be achieved to control obesity sustainably.

Comparison Between Policies and Programs in Various Developing Countries with Metabo Law in Japan

Policy comparison studies are an important approach in health policy studies because they allow for best practice identification, implementation gap mapping, and more in-depth contextual analysis. In the context of obesity control, Metabo Law's policy in Japan is an interesting case study because it successfully combines regulation-based interventions, national screening mechanisms, and systemic approaches to lifestyle change. When compared to policies in developing countries such as India, Thailand, the Philippines, Brazil, and Indonesia, a number of striking differences emerge in terms of policy design, institutional capacity, and cultural and political orientation of health.

a. Intervention Approaches: Regulative vs. Community-Promotive

The Metabo Law represents a population-based approach to regulatory intervention, in which the state plays an active role as a guide to healthy lifestyles through mandatory regulations, such as annual screening and individual risk-based behavior change programs. This approach contrasts with most developing countries that still adopt community-based promotive and preventive models. For example, the NPCDCS in India and the Healthy Lifestyle Program in the Philippines focus more on public education, the promotion of healthy lifestyles, and the strengthening of primary services, without a regulatory component or binding national screening targets.

This difference shows that the effectiveness of intervention is greatly influenced by the character of the government system and the relationship between the state and its citizens. In Japan, health regulations are widely accepted due to a tradition of collectivism and high trust in public institutions. In contrast, in many developing countries, regulatory policies often face resistance due to paternalistic perceptions of the state or limited implementation capacity at the local level.

b. Financing Mechanisms: Systemic and Innovative vs Traditional Budgets

Analysis of Prophylactic Antibiotic Administration in Obstetrics, Gynecology, Orthopedics, and Gastrointestinal Surgery at Pondok Indah Bintaro Jaya Hospital January-March 2024

One of the advantages of Metabo Law lies in its financing mechanism that is integrated into the national insurance system, allowing the implementation of the program widely and sustainably. In addition, the financial incentives and disincentives approach to institutions creates shared responsibility and strengthens institutional incentives to lower health risks.

In developing countries, Thailand is the closest example to the Japanese model, through the ThaiHealth Foundation, which is funded from special taxes on alcohol and tobacco. This model allows for the continuation of health promotion programs that do not depend on the regular state budget. In contrast, countries such as the Philippines and Brazil are still heavily reliant on annual budget allocations that are vulnerable to political and fiscal fluctuations, thus limiting the consistency and scalability of obesity programs.

c. Institutional Structure and Accountability: Institutional vs Individual Responsibility

The Metabo Law explicitly places collective responsibility on institutions, especially insurance providers and companies, which are subject to achievement targets and sanctions if they fail. This forms a structural incentive system that encourages the active involvement of the non-health sector in health promotion.

In contrast, the majority of developing countries still focus on improving individual literacy and community capacity, without a clear institutional accountability framework. For example, programs such as GERMAS in Indonesia and PAS in Brazil mobilize local actors and communities to promote healthy lifestyles, but there is no structurally binding mechanism for institutions or the private sector to take responsibility for population health outcomes.

d. Scope of Programs and Monitoring Systems

One of the main strengths of the Metabo Law is its national coverage that reaches almost the entire population aged 40–74 years, with standard measurements of waist circumference as a leading indicator of metabolic syndrome. The data from this annual examination is the basis for lifestyle interventions and monitoring of program progress.

On the other hand, developing countries do not yet have a national and integrated obesity screening system. In India, screening is more opportunistic; In Indonesia, obesity measurement is carried out through Posbindu PTM and tools such as the Obesity Carta, which is still limited and has not been standardized nationally. The disintegration of this system leads to data fragmentation and low accuracy of obesity monitoring in population.

e. Social and Cultural Context: Collectivism vs Social Fragmentation

The success of policies such as the Metabo Law cannot be separated from the context of Japan's highly collective culture, where social responsibility and adherence to common norms are part of the national identity. This model is difficult to replicate in countries with high cultural diversity, complex political dynamics, and decentralized bureaucratic systems such as Indonesia, Brazil, or the Philippines.

Cultural challenges also affect the way interventions are received by the community. For example, the waist circumference-based screening approach in Japan may not necessarily be applicable in societies that are more sensitive to body stigma or have different norms about ideal body size.

CONCLUSION

This study demonstrates that Japan's Metabo Law serves as a comprehensive regulatory model for obesity control, combining mandatory screening, standardized measurements, and institutional incentives and sanctions, which contributed to both reduced metabolic syndrome prevalence and more efficient long-term health spending. Its success is attributed to policy consistency, nationwide coverage, and cross-sector integration. In contrast, developing countries like Indonesia, India, the Philippines, Thailand, and Brazil mainly rely on educational and community-based approaches with limited regulation, monitoring, and accountability, lacking the systematic scope seen in Japan despite some innovative initiatives. Given that Japan's outcomes were shaped by unique social, cultural, and institutional factors, direct replication in developing countries is impractical; instead, future research should explore adaptive strategies that consider local contexts for effective policy transfer and implementation.

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