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Comparison between health systems of Indonesia and Singapore: A systematic review

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Abstract

Background: The performance of national health systems is influenced by various internal and external factors, including governance models, financing, and geography. While both Indonesia and Singapore operate mixed public-private healthcare systems, the outcomes and challenges they face vary significantly. Understanding these differences provides critical insight into how contextual factors shape health system effectiveness.
Purpose: To compare the health systems of Indonesia and Singapore by examining their structural components, similarities, differences, and challenges, with a focus on the integration of public health services. The analysis seeks to determine how contextual elements such as governance structure and geographical characteristics influence system performance.
Method: A systematic review with article selection guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The systematic review process begins with the formulation of clinical questions relevant to the topic. Before this, the authors establish PICOS criteria, which stand for: P (problem, patient, or population), I (intervention, prognostic factor, or exposure), C (comparison or control), O (outcome), and S (study design). For this article, P: Health systems in southeast asian countries specifically indonesia and singapore. I: Implementation and structure of the health system in Singapore, C: Health system in Indonesia, O: Comparative insights regarding efficiency, equity, accessibility, health outcomes, and quality of care between both countries, S: Systematic Review and Randomized Controlled Trials. The article search was conducted systematically using the keywords: “Health” AND “Workforce,” AND “Record,” “Vaccine Distribution,” AND “Leadership,” AND “Service Delivery,” AND “Financing System,” AND “Information System,” AND “Indonesia” OR “Singapore”.
Results: Singapore’s centralized governance and compact geography enable efficient, integrated healthcare services, leading to superior health outcomes such as higher life expectancy and better physician coverage. In contrast, Indonesia’s decentralized system and geographic dispersion cause fragmented service delivery, resulting in lower life expectancy, fewer healthcare workers, and greater reliance on out-of-pocket spending.
Conclusion: Singapore’s centralized and well-coordinated health system enables efficient service integration and strong health outcomes, while Indonesia’s decentralized structure and vast geography create challenges in achieving equitable and effective healthcare delivery. Strengthening governance, health workforce distribution, and digital health integration are key for Indonesia to enhance its system performance and reduce disparities.

Keywords: Comparative; Health Governance; Health System; Health Financing; Public Health.

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INTRODUCTION

Singapore, a highly urbanized city-state of about 5.79 million people, is facing the dual challenges of an aging population with over 21% aged 65 and above and a growing burden of non-communicable diseases (NCDs), responsible for around 75% of deaths, mainly from ischaemic heart disease and stroke (Foo, Chia, Tan, Lai, Khoo, Tee, & Teo, 2024). Despite its excellent health outcomes, including a life expectancy of 83.9 years, low maternal mortality (7/100,000), and under-five mortality (2/1.000), the country's healthcare system is under increasing strain (Pacific, 2023). Government health spending rose sharply from 7.4% to 20.8% of total expenditure between 2000 and 2021, with healthcare costs projected to reach SGD 27 billion by 2030. Social inequality poses an additional challenge in managing the pressures of demographic aging and rising chronic disease prevalence (World Health Organization, 2024).

Indonesia, the fourth most populous country in the world with around 270–281 million people, is experiencing rapid socioeconomic and demographic transitions. Despite substantial economic growth nearly quadrupling since 1990 and projected to exceed $5 trillion by 2030 and a decline in poverty rates from 30% in 1980 to under 10% in 2019, the health system continues to face major challenges. Health expenditure remains low at about 4% of GDP, and life expectancy, which improved from 63 years in 1990 to 71.4 years in 2019, fell to 68.3 years following system strains after 2019. Indonesia struggles with a triple burden of diseas infectious diseases such as tuberculosis, rising non-communicable diseases, and maternal-child health issues with cardiovascular diseases, stroke, and diabetes as the leading causes of death (Rahman, 2024). Although universal health coverage has expanded and maternal and child health outcomes have improved, regional disparities remain significant, with life expectancy differing by up to 13.7 years between provinces, especially disadvantaging eastern and rural areas (Ekoriono, Widiyanto, Muthmainah, Devi, Cahyono, Nafsi, & Widodo, 2025).

RESEARCH METHOD

A systematic review with article selection guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The systematic review process begins with the formulation of clinical questions relevant to the topic. Before this, the authors establish PICOS criteria, which stand for: P (problem, patient, or population), I (intervention, prognostic factor, or exposure), C (comparison or control), O (outcome), and S (study design). For this article, P: Health systems in southeast asian countries specifically indonesia and singapore. I: Implementation and structure of the health system in Singapore, C: Health system in Indonesia, O: Comparative insights regarding efficiency, equity, accessibility, health outcomes, and quality of care between both countries, S: Systematic Review and Randomized Controlled Trials.

The article search was conducted systematically using the keywords: "Health" AND "Workforce," AND "Record," "Vaccine Distribution," AND "Leadership," AND "Service Delivery," AND "Financing System," AND "Information System," AND "Indonesia" OR "Singapore".

The inclusion criteria inquired empirical research articles, policy reports, or systematic reviews discussing national health systems, studies addressing key health system components (e.g., financing, service delivery, human resources, access, insurance, governance, or quality of care), studies conducted in or comparing indonesia and singapore, published between 2019–2025 in english and peer-reviewed journals or official institutional/governmental reports. The exclusion criteria included opinion papers, commentaries, or editorials without data or analysis, studies focusing only on specific diseases, clinical interventions, or local hospital systems, studies focused on countries other than indonesia and singapore and non-peer-reviewed sources or informal publications.

The initial search resulted in ProQuest, PubMed, Scopus, Springer, and Web of Science. After screening and filtering based on the predefined criteria, 42 articles met the inclusion criteria and were selected for further analysis.

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RESEARCH RESULTS

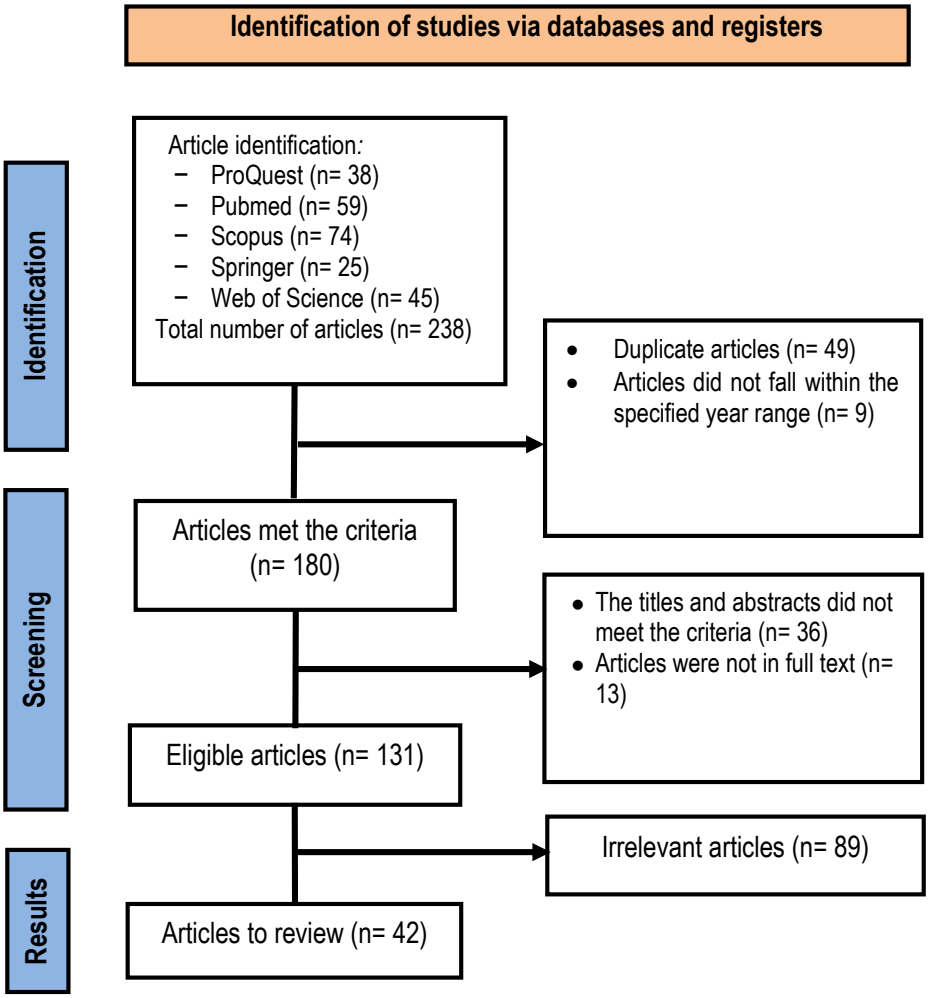


Figure PRISMA Flow Diagram

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Table The Main Characteristics of Included Studies

(Author, Year) (Country)	Purpose	Methods	Results
(Aisyah et al., 2024) (Indonesia)	To advance its digital health vision, the government is prioritizing the development of health data and application systems into an integrated health care technology ecosystem.	Evaluation study	Average score 2.74/5.0 (between "basic" and "good")
(Al-Worafi, 2020) (Indonesia)	To explore the drug (medication) safety-related issues in Indonesia, highlighting present practices and reporting challenges and offering recommendations to overcome the challenges.	Book chapter	Variable BPOM approval timelines
(Ang, 2023) (Singapore)	To examine the historical and structural development of private hospitals in Singapore between 1983 and 2022	Historical analysis	Development from 1983-2022
(Asante et al., 2023) (Indonesia)	To evaluate how the benefits and burden of health financing are distributed across income groups and the extent to which Indonesia has achieved equity in the funding and delivery of health care after financing reforms.	Cross-sectional	Health spending 2.9% of GDP
(Azam et al., 2024) (ASEAN)	Explores empirically the nexus of environmental quality, measured by carbon dioxide (CO2) emissions, and human-health-capital formation.	Panel data analysis	Common regional health challenges
(Basabih et al., 2022) (Indonesia)	To identify the PPP effect on hospital performance indicators and its implementation challenges.	Literature review	Limited physician oversight in some districts
(Cheng et al., 2022) (Indonesia)	To assess the equity with which contributions to the health financing system were distributed in Indonesia	Financing incidence analysis	JKN reached 84% coverage by 2019
(Ekoriano et al., 2025) (Indonesia)	This study aimed to determine the profile of and test the factors that cause LBW in Indonesia.	National survey	Rural-urban disparities
(Fanda et al., 2024) (Indonesia)	Examines the availability of essential medicine in primary health centres (phcs) across Indonesia, the reasons why medicines are unavailable, and the extent to which communities have access to alternative dispensing points.	Cross-sectional	Falls short of WHO's 80% target

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(Author, Year) (Country)	Purpose	Methods	Results
(Feng et al., 2024) (ASEAN)	To review the various harmonization initiatives of ASEAN and evaluate the potential benefits of an ASEAN Medicines Agency,	Policy review	ASEAN medicines agency discussion
(Foo et al., 2024) (Singapore)	To explore and analyze the role of community hospitals in mitigating the health system burden in Singapore	Literature Review	Hospital bed occupancy >90%; Only 4-5% referrals from acute to community hospitals
(Fuady et al., 2024) (Indonesia)	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.	Policy analysis	Gaps in preventive care financing
(Gamalliel & Fuady, 2024) (Indonesia)	To analyze Indonesia's new Health Law in the context of democratic health governance and legislative reform	Policy analysis	Democratic health governance lessons
(Haemmerli et al., 2021) (Indonesia)	To investigate the extent of inequalities in the availability of quality health services across the Indonesian health system with a particular focus on differences between care delivered	Equity study	Private sector delivers 2/3 of outpatient services
(Hardhantyo et al., 2022) (Indonesia)	To describe the quality of the implementation of Indonesia's Early Warning and Response Alert System (EWARS) for disease surveillance and to measure the burden of disease surveillance reporting quality before and during the COVID-19 epidemic in Indonesia.	Mixed-method study	Quality assessment before and during COVID-19
(Hasanbasri et al., 2024) (Indonesia)	Examines health system determinants that explain the poor performance of Posyandu and examines the roles of village and township	Mixed methods	Community health worker perspectives
(Hermansyah et al., 2020) (Indonesia)	Described as in the state of infancy with several intractable barriers that have been substantially and continuously hampering the practice	Policy review	>90% UHC coverage by 2020

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(Author, Year) (Country)	Purpose	Methods	Results
(Hossain et al., 2025) (Singapore)	Investigates the electronic recordkeeping culture in Indonesian hospitals following a government mandate to adopt Electronic Medical Records (emrs)	Exploratory study	270 million paper-based records still in use
(Jain & Patil, 2025) (Singapore)	To examine the structure, approval processes, classification systems, and post-market surveillance mechanisms governing medical devices in both countries.	Regulatory overview	HSA oversight and ACE assessments
(Kharisma et al., 2024) (Indonesia)	Analyzes personal data protection regulations in the health sector from a comparative legal perspective between Indonesia, Singapore and the European Union (EU).	Country strategy	Continuity and change framework
(Mboi et al., 2022) (Indonesia)	To systematically assess the health status and disease burden across Indonesia's provinces from 1990 to 2019 as part of the Global Burden of Disease (GBD) Study 2019.	Systematic analysis	13.7-year life expectancy variation across regions
(Meilianti et al., 2022) (Indonesia)	To analyse pharmacists' capacity in Indonesia to identify emerging workforce planning gaps for future workforce planning and policies in Indonesia.	National analysis	22% of medical schools meet top accreditation
(Muharram et al., 2024) (Indonesia)	Examining the distribution patterns and identifying the areas of critical need, the study seeks to inform policy interventions that can more effectively address the health worker (HW) distribution.	National analysis	3.84 health workers per 1.000 population (below WHO threshold)
(Musadad et al., 2023) (Indonesia)	To examine the implementation process and challenges in developing and strengthening the Civil Registration and Vital Statistics (CRVS) system in Indonesia	Implementation research	83-89% birth/death registration completeness in pilot areas
(Nisa et al., 2024) (Indonesia)	To analyze and compare the elements that influence these differences.	System analysis	Out-of-pocket: 32.1%; Government: 48.2%
(Pacific et al., 2023) (Singapore)	To examine and describe Singapore's national health strategy "Healthier SG," which aims to transform the country's healthcare system from a treatment-based model to a preventive and community-centered model.	Commentary	Focus shift from hospital to community care

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(Author, Year) (Country)	Purpose	Methods	Results
(Paluttri, 2024) (Multi-country)	To study the legal structure of top-performing health governance systems and compare them with the Indonesian health social security system to identify the main differences and provide recommendations for Indonesian and other developing countries' health policymakers and administrators.	Comparative legal study	Indonesia, France, Singapore comparison
(Purwatiningsih et al., 2022) (Indonesia)	To provide the best service for their patients	Health profile	Life expectancy: 71.4 years
(Putra et al., 2022) (Indonesia)	To obtain equal basic needs, right, and access to health services for every citizen, various countries are trying to implement universal/national health insurance.	Health system analysis	Out-of-pocket spending ~40% of total health expenditure
(Raghavan et al., 2021) (Singapore)	Examine the adoption of cloud technologies in public health systems and to analyze the key drivers and barriers influencing this adoption	Comparative analysis	Near-universal adoption in public sector; 27% in private
(Rahman, 2024) (Indonesia)	To examine the current challenges facing Indonesia's healthcare system	Healthcare landscape	Out-of-pocket: 49.6%
(Ramesh & Qian, 2025) (Singapore)	Examines the country's primary care system through four key dimensions: governance, provision, financing, and payment. It argues that insufficient coordination and integration, stemming from a lack of appropriate incentives and controls for healthcare providers, are at the source of the system's shortcomings.	Policy analysis	MediShield Life insurance coverage
(Rammohan et al., 2024) (Indonesia)	To empirically analyze the socioeconomic and demographic correlates of maternal and child health (MCH) care utilization in Indonesia using the continuum of care (coc) concept.	Research study	<50% receive all four essential MCH services
(Saltman et al., 2022) (Singapore)	To compare the health systems of Singapore and Sweden	Comparative study	Cost-efficiency through market strategies

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(Author, Year) (Country)	Purpose	Methods	Results
(Samarasekera et al., 2024) (Singapore)	To examine how integrated inter-professional education (IPE) can transform healthcare delivery and improve collaboration among healthcare professionals within academic and clinical settings.	Descriptive study	3 medical schools with 870 annual student intakes
(Sari et at., 2023) (Indonesia)	This study aims to develop domains and indicators of hospital resilience in facing the disruption era.	Qualitative study	Developing resilience domains in disruption era
(See, 2020) (Singapore)	To explore the attitudes and perceptions of general practitioners (gps) toward the National Electronic Health Record (NEHR) system in Singapore.	Survey	Limited private provider integration
(Smith et al., 2024) (Singapore)	To assess the feasibility of collecting buccal samples by general practitioners (gps) at private practices in Singapore	Feasibility study	Integration into routine clinical care
(Tan et al., 2024) (Singapore)	This paper outlines Singapore's strategy and its impact on public health during the transition to endemicity over 54 weeks from February 2022 to February 2023.	Program analysis	Strategies and insights from pandemic year
(WHO, 2024) (Indonesia)	To outline the strategic framework for collaboration between the World Health Organization (WHO) and the Government of Indonesia for the period 2023–2027	Health profile	Life expectancy: 83.9 years
(Yang et al., 2025) (Singapore)	To determine if the introduction of Healthier-SG was associated with changes in outcomes of admitted patients.	Outcome study	Reduced hospital stays from 3.8 to 3.5 days
(Zainal et al., 2022) (Singapore)	Study explores broader personal, professional and organisational factors affecting their experiences.	Qualitative study	95% of primary care physician attrition from public sector

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DISCUSSION

Service Delivery

The comparison of healthcare service delivery in Singapore and Indonesia reveals structural and contextual contrasts that influence performance and equity. Singapore's hybrid public–private healthcare model, organized into three Regional Health Systems (RHSs), achieves strong outcomes but faces challenges in service integration and high out-of-pocket spending around 40% of total health expenditure, twice the OECD average (Nisa, Dompak, & Lodan, 2024). In contrast, Indonesia operates a decentralized three-tiered health system, with puskesmas as the primary foundation supported by secondary and tertiary hospitals (Haemmerli, Powell, Goodman, Thabrany, & Wiseman, 2021). Disparities persist due to uneven distribution of resources and low physician density at 6.9 per 10,000 population (Sari, Omar, Pasinringi, Zulkifli, & Sidin, 2023). Both nations rely heavily on private providers for outpatient services approximately 80% in Singapore and two-thirds in Indonesia but differ in governance and accessibility outcomes. Singapore's compact geography and centralized structure facilitate integrated care and higher life expectancy (83.9 years), while Indonesia's fragmented, archipelagic system hampers equitable service delivery despite widespread primary care coverage (Tan, Khamis, Goh, Mah, Yeo, Ngan, & Ho, 2024).

Health Workforce

Singapore and Indonesia have both made significant progress in strengthening their health workforces, yet major disparities remain in scale, distribution, and quality. Singapore's physician density nearly doubled from 13.8 to 26.0 per 10.000 between 2000 and 2021, supported by the expansion of medical education through three universities with an annual intake of around 870 students). Singapore's training programs are uniformly high in quality and interdisciplinary, while only 22% of Indonesia's medical schools meet top accreditation standards (Samarasekera, Chong, Ban, Lau, Gallagher, Zhi, & Lee, 2024).

Retention in the public sector is a persistent issue, as most physicians leaving primary care originate from public facilities, resulting in an uneven distribution between roughly 1.700 private clinics and only 20 public ones (Zainal, Quah, & Smith, 2022). Indonesia's workforce faces more fundamental challenges, with an overall health worker density of 3.84 per 1.000 below the WHO's target of 4.45 and physician density rising from 1.3 to 6.9 per 10.000 population between 2003 and 2022. Geographic inequality remains severe, as most doctors are concentrated in urban centres that serve only one-fifth of the population. Both countries share similar trends in expanding medical education and increasing workforce capacity (Muharram, Sulistya, Swannjo, Firmansyah, Rizal, & Romdhoni, 2024). Singapore maintains far higher workforce ratios 26 physicians and 61.8 nurses per 10.000 people compared to Indonesia's 6.9 physicians and 41.7 nurses (Meilianti, Smith, Kristanto, Himawan, Ernawati, Naya, & Bates, 2022).

Health Information Systems

Singapore and Indonesia have both developed national digital health systems to strengthen health information management, but they differ significantly in maturity, integration, and adoption levels. Singapore's National Electronic Health Record (NEHR), launched in 2011 under the "One Patient, One Health Record" principle, enables near-universal data sharing across public healthcare institutions and patient access through the HealthHub platform (Raghavan, Demircioglu, & Taeihagh, 2021). Despite measurable benefits such as reduced hospital stays and lower mortality following the Healthier-SG initiative private sector integration remains limited, with only 27% adoption due to technical and financial constraints (See, 2020).

Indonesia introduced SATUSEHAT in 2022, requiring all facilities to adopt electronic medical records by 2023. implementation is hindered by poor internet access, low digital literacy, and the continued use of over 270 million paper records (Hossain, Sutanto, Handayani, Haryanto, Bhowmik, & Frings, 2025). The country scored 2.74 out of 5.0 on ICT maturity, reflecting "basic to good" capacity, though progress varies widely across regions, with Java performing better than eastern provinces like Sulawesi (Aisyah, Setiawan, Lokopessy, Faradiba, Setiaji, Manikam, Kozlakidiz, 2024). While improvements in surveillance and civil registration

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(88-89% completeness) have been noted (Musadad, Angkasawati, Usman, Kelly, & Rao, 2023). Both systems share similarities such as national electronic health platforms, routine surveys, and disease surveillance but differ in scale and integration. Singapore's NEHR is a mature, well-integrated system over a decade old, while Indonesia's SATUSEHAT remains in its early phase, constrained by regional and infrastructural inequalities (Hardhantyo, Djasri, Nursetyo, Yulianti, Adipradipta, Hawley, & Brye, 2022).

Medical Products, Vaccines, and Technologies

Singapore and Indonesia both regulate medical products, pharmaceuticals, and health technologies through centralized national agencies but differ significantly in system maturity and equity of access. In Singapore, the Health Sciences Authority (HSA) oversees regulation, while the Agency for Care Effectiveness (ACE) conducts health technology assessments (Jain & Patil, 2025). The country ensures broad pharmaceutical access through the Standard Drug List and Medication Assistance Fund, complemented by MediShield Life insurance coverage (Ramesh & Qian, 2025). Singapore also leads in digital integration, with pharmacogenomic testing embedded in clinical care and expanded telemedicine adoption post-COVID-19 (Smith, Dawes, Katzov, Burrell, Xin, & Winther, 2024). By contrast, Indonesia faces persistent disparities in medicine availability and technological access. Despite regulatory oversight by BPOM, access to essential medicines remains below the WHO's 80% benchmark, with strong regional inequalities between Java and remote provinces (Al-Worafi, 2020).

Although over 90% of the population is covered under national health insurance, affordability remains limited (Hermansyah, Wulandari, Kristina, & Meilianti, 2020). Health spending is constrained to 2.9% of GDP, restricting pharmaceutical investment, though the COVID-19 pandemic spurred digital innovation with 36 new technologies adopted (Asante, Cheng, Susilo, Satrya, Haemmerli, Fattah, & Wiseman, 2023). Both countries promote universal health coverage, maintain national essential medicine lists, and participate in ASEAN regulatory harmonization. However, Singapore's system is more advanced, integrating genomic medicine and digital platforms effectively, while Indonesia continues to struggle with unequal access across its vast archipelago (Feng, Miranda, Obnial, Ebhodaghe, & Lucero, 2024).

Health Financing

Singapore and Indonesia both apply mixed health financing models, yet differ substantially in efficiency, coverage, and equity. In Singapore, the system integrates mandatory savings (MediSave), national insurance (MediShield Life), and government subsidies, achieving strong financial protection and cost-efficiency (Saltman, Yeh, & Liu, 2022). Health expenditure accounts for 4.47% of GDP (USD 2.462.39 per capita), with out-of-pocket (OOP) spending reduced to 32.1% and government contributions rising to 48.2%. Programs such as MediFund support low-income citizens, and features like transferable MediSave funds encourage cost-conscious use of healthcare resources (Putra & Sjaaf, 2022). Indonesia's mixed financing model anchored by the National Health Insurance (JKN) under BPJS faces ongoing challenges. Despite reaching 84% population coverage by 2019 and targeting full coverage by 2024, out-of-pocket spending remains high at 49.6%, well above global averages (Cheng, Asante, Susilo, Satrya, Man, Fattah, & Wiseman, 2022).

The decentralized system contributes to inefficiency, uneven resource distribution, and regional implementation disparities (Paluttri, 2024). Indonesia continues to rely partially on international donor funding, reflecting limited fiscal capacity and governance fragmentation. Both nations integrate social insurance, subsidies, and OOP spending within mixed systems. Singapore's model provides stronger financial protection, achieving full coverage and lower OOP rates, whereas Indonesia remains constrained by decentralization, external funding reliance, and incomplete universal enrollment (Fuady, Anindhita, Haniifah, Ahsan, Sugiharto, Haya, & Widyahening, 2024).

Leadership and Governance

Singapore's centralized governance model allows for coordinated, efficient, and transparent health system management, with the Ministry of Health overseeing all policy, regulation, and strategy. The system is organized into three Regional Health

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Systems (RHSs), guided by frameworks like the "Three Beyonds" and Healthier SG, emphasizing preventive, value-based, and community centered care. Strong regulatory bodies the Health Sciences Authority and Agency for Care Effectiveness ensure high standards, while digital integration supports continuity of care (Kharisma & Diakanza, 2024). Conversely, Indonesia's decentralized governance, implemented after the 2001 reform, distributes authority among national, provincial, and district levels (Gamalliel & Fuady, 2024).

While this system promotes local innovation and community participation through initiatives like posyandu, it suffers from inconsistent regulation, fragmented accountability, and widened regional disparities (Hasanbasri, Maula, Wiratama, Espressivo, & Marthias, 2024). Both nations face aging populations and rising non-communicable diseases, and both rely on public private collaboration within ASEAN frameworks (Azam, Islam, & Rashid, 2024). Singapore's centralized model supports clear accountability and policy coherence, whereas Indonesia's decentralization results in governance fragmentation and uneven performance (Basabih, Prasojo, & Rahayu, 2022).

Comparative Analysis and Integration Challenges

Singapore has a well-organized healthcare system but faces challenges from an aging population, rising costs, and workforce retention issues. Healthcare spending is projected to increase from SGD 3.7 billion in 2009 to SGD 27 billion by 2030, with hospital occupancy exceeding 90% and out-of-pocket payments around 40%, double the OECD average (Ang, 2023). The public sector struggles with physician retention, and coordination between public hospitals and private clinics remains weak, with only 4–5% referral rates (Yang, Venkatacham, Low, Foo, Aung, See, & Soh, 2025). Indonesia's healthcare system is hindered by geographical disparities, with only 14.4% of health workers in remote areas and infrastructure concentrated in cities. High out-of-pocket expenses (49.6%) and low workforce competency and density (3.84 per 1.000 population) further limit system performance. Overall, Singapore's system is stronger but strained by aging and cost pressures, while Indonesia continues to struggle with inequity, underfunding, and limited workforce capacity (Rammohan, Goli, & Chu, 2024).

Both Singapore and Indonesia operate mixed public-private healthcare systems and face aging population challenges, but system integration issues are far more severe in Indonesia. Singapore's centralized governance enables efficient policy execution and better outcomes, including a life expectancy of 83.9 years and lower out-of-pocket costs (32.1%), compared to Indonesia's 71.4 years and 49.6%. Singapore also maintains a stronger health workforce with 26 physicians per 10,000 population, versus Indonesia's 6.9 (Purwatiningsih, Lestari, & Dhuhaniyati, 2022). Singapore's Healthier SG and Three Beyonds initiatives emphasize preventive, community-based care, supported by digital integration through HealthHub and coordinated Regional Health Systems. In contrast, Indonesia depends on posyandu for community level prevention but struggles with fragmented services and inconsistent coverage across its vast geography. Singapore achieves more cohesive and technologically integrated preventive care, while Indonesia's decentralized model continues to face gaps in service quality and continuity (Fanda, Probandari, Yuniar, Hendarwan, Trisnantoro, Jongeneel, & Kok, 2024).

CONCLUSION

Singapore's centralized governance and compact geography enable efficient, integrated healthcare services, leading to superior health outcomes such as higher life expectancy and better physician coverage. Indonesia's decentralized system and geographic dispersion cause fragmented service delivery, resulting in lower life expectancy, fewer healthcare workers, and greater reliance on out-of-pocket spending.

REFERENCES

Aisyah, D. N., Setiawan, A. H., Lokopessy, A. F., Faradiba, N., Setiaji, S., Manikam, L., & Kozlakidis, Z. (2024). The Information And Communication Technology Maturity Assessment At Primary Health Care Services Across 9 Provinces In Indonesia: Evaluation Study. JMIR Medical Informatics, 12, E55959.

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DOI: https://doi.org/10.33024/minh.v8i8.1146

Al-Worafi, Y. M. (2020). Drug Safety In Indonesia. In Drug Safety In Developing Countries (Pp. 279-285). Academic Press.

Ang, Y. G. (2023). Development Of The Private Hospitals In Singapore From 1983 To 2022. Journal Of Hospital Management And Health Policy, 7.

Asante, A., Cheng, Q., Susilo, D., Satrya, A., Haemmerli, M., Fattah, R. A., & Wiseman, V. (2023). The Benefits And Burden Of Health Financing In Indonesia: Analyses Of Nationally Representative Cross-Sectional Data. The Lancet Global Health, 11(5), E770-E780.

Azam, M., Islam, F., & Rashid, S. (2024). Health, Environment, And Sustainable Development: Evidence From Panel Data From ASEAN Countries. Air Quality, Atmosphere & Health, 17(4), 827-842.

Basabih, M., Prasojo, E., & Rahayu, A. Y. S. (2022). Hospital Services Under Public-Private Partnerships, Outcomes And, Challenges: A Literature Review. Journal Of Public Health Research, 11(3), 22799036221115781.

Cheng, Q., Asante, A., Susilo, D., Satrya, A., Man, N., Fattah, R. A., & Wiseman, V. (2022). Equity Of Health Financing In Indonesia: A 5-Year Financing Incidence Analysis (2015–2019). The Lancet Regional Health–Western Pacific, 21.

Ekoriano, M., Widiyanto, A., Muthmainnah, M., Devi, Y. P., Cahyono, B. E., Nafsi, I., & Widodo, T. (2025). Profile And Factors Associated With Low Birth Weight In Indonesia: A National Data Survey. Rural And Remote Health, 25(1), 1-9.

Fanda, R. B., Probandari, A., Yuniar, Y., Hendarwan, H., Trisnantoro, L., Jongeneel, N., & Kok, M. O. (2024). The Availability Of Essential Medicines In Primary Health Centres In Indonesia: Achievements And Challenges Across The Archipelago. The Lancet Regional Health-Southeast Asia, 22.

Feng, K., Miranda, A. V., Obnial, J. C., Ebhodaghe, I. D., & Lucero-Prisno III, D. E. (2024). Drug Regulatory Harmonization In The Association Of Southeast Asian Nations: Is It Time For An ASEAN Medicines Agency? A Policy Review. Clinical Epidemiology And Global Health, 28, 101649.

Foo, C. D., Chia, H. X., Tan, S. Y. T., Lai, Y. F., Khoo, J. E. J., Tee, S. Y., & Teo, K. W. (2024). Community Hospitals Of The Future: The Role Of Community Hospitals To Mitigate Health System Burden In Singapore. Frontiers In Health Services, 4, 1407528.

Fuady, A., Anindhita, M., Haniifah, M., Ahsan, A., Sugiharto, A., Haya, M. A. N., & Widyahening, I. S. (2024). Bridging The Gap: Financing Health Promotion And Disease Prevention In Indonesia. Health Research Policy And Systems, 22(1), 146.

Gamalliel, N., & Fuady, A. (2024). Indonesia's New Health Law: Lessons For Democratic Health Governance And Legislation. The Lancet Regional Health-Southeast Asia, 23.

Haemmerli, M., Powell-Jackson, T., Goodman, C., Thabrany, H., & Wiseman, V. (2021). Poor Quality For The Poor? A Study Of Inequalities In Service Readiness And Provider Knowledge In Indonesian Primary Health Care Facilities. International Journal For Equity In Health, 20(1), 239.

Hardhantyo, M., Djasri, H., Nursetyo, A. A., Yulianti, A., Adipradipta, B. R., Hawley, W., & Brye, L. (2022). Quality Of National Disease Surveillance Reporting Before And During COVID-19: A Mixed-Method Study In Indonesia. International Journal Of Environmental Research And Public Health, 19(5), 2728.

Hasanbasri, M., Maula, A. W., Wiratama, B. S., Espressivo, A., & Marthias, T. (2024). Analyzing Primary Healthcare Governance In Indonesia: Perspectives Of Community Health Workers. Cureus, 16(3).

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Hermansyah, A., Wulandari, L., Kristina, S. A., & Meilianti, S. (2020). Primary Health Care Policy And Vision For Community Pharmacy And Pharmacists In Indonesia. Pharmacy Practice (Granada), 18(3).

Hossain, M. K., Sutanto, J., Handayani, P. W., Haryanto, A. A., Bhowmik, J., & Frings-Hessami, V. (2025). An Exploratory Study Of Electronic Medical Record Implementation And Recordkeeping Culture: The Case Of Hospitals In Indonesia. BMC Health Services Research, 25(1), 1-20.

Jain, K. D., & Patil, S. B. (2025). Overview Of Medical Device Regulations In Singapore And Thailand. Biomedical Materials & Devices, 3(1), 259-276.

Kharisma, D. B., & Diakanza, A. (2024). Patient Personal Data Protection: Comparing The Health-Care Regulations In Indonesia, Singapore And The European Union. International Journal Of Human Rights In Healthcare, 17(2), 157-169.

Mboi, N., Syailendrawati, R., Ostroff, S. M., Elyazar, I. R., Glenn, S. D., Rachmawati, T., & Mokdad, A. H. (2022). The State Of Health In Indonesia's Provinces, 1990–2019: A Systematic Analysis For The Global Burden Of Disease Study 2019. The Lancet Global Health, 10(11), E1632-E1645.

Meilianti, S., Smith, F., Kristianto, F., Himawan, R., Ernawati, D. K., Naya, R., & Bates, I. (2022). A National Analysis Of The Pharmacy Workforce In Indonesia. Human Resources For Health, 20(1), 71.

Muharram, F. R., Sulistya, H. A., Swannjo, J. B., Firmansyah, F. F., Rizal, M. M., Izza, A., & Romdhoni, A. C. (2024). Adequacy And Distribution Of The Health Workforce In Indonesia. WHO South-East Asia Journal Of Public Health, 13(2), 45-55.

Musadad, D. A., Angkasawati, T. J., Usman, Y., Kelly, M., & Rao, C. (2023). Implementation Research For Developing Civil Registration And Vital Statistics (CRVS) Systems: Lessons From Indonesia. BMJ Global Health, 8(7).

Nisa, K. F., Dompak, T., & Lodan, K. T. (2024, September). Perbandingan Sistem Pelayanan Kesehatan Di Indonesia Dan Di Singapura. In Prosiding Seminar Nasional Ilmu Sosial Dan Teknologi (SNISTEK) (Vol. 6, Pp. 72-77).

Pacific, T. L. R. H. W. (2023). Healthier SG: For A Healthier Singapore And Beyond. The Lancet Regional Health: Western Pacific, 37, 100893.

Paluttri, S. (2024). Comparative Approach In Public Health Social Security: A Legal Case Study Of The Indonesian, France, And Singapore Health Systems. International Journal Of Human Rights In Healthcare, 17(5), 572-587.

Purwatiningsih, A., Lestari, A. W., & Dhuhaniyati, L. (2022). Implications Of Healthcare System In Singapore And Malaysia As Interesting Lessons Towards Primary Service Innovation For Indonesia. Asketik: Jurnal Agama Dan Perubahan Sosial, 6(1), 16-28.

Putra, J. A. D., & Sjaaf, A. C. (2022). Comparison Of The Health Service System And The Universal Health Insurance Among Indonesia's Neighboring Countries. Daengku: Journal Of Humanities And Social Sciences Innovation, 2(4), 502-508.

Raghavan, A., Demircioglu, M. A., & Taeihagh, A. (2021). Public Health Innovation Through Cloud Adoption: A Comparative Analysis Of Drivers And Barriers In Japan, South Korea, And Singapore. International Journal Of Environmental Research And Public Health, 18(1), 334.

Rahman, F. F. (2024). Indonesia's Healthcare Landscape: Embracing Innovation In The New Health Regime. Current Medical Research And Opinion, 40(6), 929-933.

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DOI: https://doi.org/10.33024/minh.v8i8.1146

Ramesh, M., & Qian, J. (2025). Strengthening Primary Care In Singapore: Aligning Vital Health System Components. Policy Design And Practice, 8(1), 50-63.

Rammohan, A., Goli, S., & Chu, H. (2024). Continuum Of Care In Maternal And Child Health In Indonesia. Primary Health Care Research & Development, 25, E17.

Saltman, R. B., Yeh, M. J., & Liu, Y. (2022). Can Asia Provide Models For Tax-Based European Health Systems? A Comparative Study Of Singapore And Sweden. Health Economics, Policy And Law, 17(2), 157-174.

Samarasekera, D. D., Chong, Y. S., Ban, K., Lau, L. S. T., Gallagher, P. J., Zhi Xiong, C., & Lee, S. S. (2024). Transforming Healthcare With Integrated Inter-Professional Education In A Research-Driven Medical School. Medical Teacher, 46(12), 1553-1560.

Sari, N., Omar, M., Pasinringi, S. A., Zulkifli, A., & Sidin, A. I. (2023). Developing Hospital Resilience Domains In Facing Disruption Era In Indonesia: A Qualitative Study. BMC Health Services Research, 23(1), 1395.

See, Q. Y. (2020). Attitudes And Perceptions Of General Practitioners Towards The National Electronic Health Record (NEHR) In Singapore. EMJ, 5(1), 86-93.

Smith, H., Dawes, M., Katzov-Eckert, H., Burrell, S., Xin Hui, S., & Winther, M. D. (2024). Improving Prescribing: A Feasibility Study Of Pharmacogenetic Testing With Clinical Decision Support In Primary Healthcare In Singapore. Family Practice, 41(4), 477-483.

Tan, H. Y., Khamis, N. H., Goh, A., Mah, T. K., Yeo, B., Ngan, J. Y., & Ho, Z. J. M. (2024). Singapore's COVID-19 Genomic Surveillance Programme: Strategies And Insights From A Pandemic Year. Influenza And Other Respiratory Viruses, 18(12), E70060.

World Health Organization. (2024). Country Cooperation Strategy 2023-2027: Indonesia Continuity And Change. In Country Cooperation Strategy 2023-2027: Indonesia Continuity And Change.

Yang, Y., Venkatachalam, I., Low, C. T., Foo, M. Z. Q., Aung, M. K., See, S. W. J., & Soh, C. R. (2025). Transforming Healthcare System: Outcomes Of Healthier-SG From A Large Tertiary-Care Hospital In Singapore. Health Policy And Technology, 14(1), 100968.

Zainal, H., Quah, J. H., & Smith, H. E. (2022). Experiences Of Doctors Working In Singapore's Public Primary Healthcare Clinics. Health & Social Care In The Community, 30(5), E1948-E1958.

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