

The Fiscal Sustainability of Thailand's Universal Health Coverage System: Lessons from Comparative Analysis of the United Kingdom, Canada, and Indonesia

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Received: September 21, 2025

Revised: May 28, 2026

Accepted: June 10, 2026

Abstract

This study examines the fiscal sustainability challenges confronting Thailand's Universal Health Coverage (UHC) system, which is facing increasing fiscal pressure from population ageing, rising healthcare expenditures, and the growing costs of medical technologies. These challenges have contributed to accumulated financial deficits among a significant number of public hospitals. Employing a qualitative research approach based on documentary research and comparative policy analysis, the study compares healthcare financing systems in the United Kingdom, Canada, and Indonesia through the lens of fiscal sustainability.

The findings reveal that Thailand's primary challenge stems from a structural imbalance between the growth of healthcare expenditures and available fiscal resources. Comparative analysis shows that the selected countries have adopted different institutional mechanisms to enhance healthcare sustainability, including strategic purchasing and health technology assessment in the United Kingdom, global budgeting and expenditure control in Canada, and referral management alongside diversified financing arrangements in Indonesia.

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The study concludes that strengthening risk-adjusted resource allocation, enhancing strategic purchasing mechanisms, improving expenditure management, and diversifying healthcare financing sources are critical for ensuring the long-term fiscal sustainability of Thailand's UHC system while preserving equitable access to healthcare services. The findings provide policy-relevant insights for healthcare financing reform in Thailand and other middle-income countries facing similar fiscal challenges.

Keywords: Universal Health Coverage (UHC), Fiscal Sustainability, Healthcare Financing, Comparative Health Systems, Strategic Purchasing, Thailand.

ความยั่งยืนของระบบหลักประกันสุขภาพถ้วนหน้า ของไทย: ปัญหา ความท้าทายและทิศทาง โดยศึกษา บทเรียนจากการวิเคราะห์เปรียบเทียบระบบ ของสหราชอาณาจักร แคนาดา และอินโดนีเซีย

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บทคัดย่อ

การศึกษานี้มุ่งวิเคราะห์ความท้าทายด้านความยั่งยืนทางการคลังของระบบหลักประกันสุขภาพถ้วนหน้า (Universal Health Coverage: UHC) ของประเทศไทย ซึ่งกำลังเผชิญแรงกดดันทางการคลังจากการเข้าสู่สังคมสูงวัย การเพิ่มขึ้นของค่าใช้จ่ายด้านสุขภาพ และต้นทุนเทคโนโลยีทางการแพทย์ที่สูงขึ้น ส่งผลให้โรงพยาบาลของรัฐจำนวนมากประสบภาวะขาดทุนสะสม การวิจัยใช้ระเบียบวิธีวิจัยเชิงคุณภาพ โดยอาศัยการวิจัยเอกสารและการวิเคราะห์เชิงเปรียบเทียบระบบการเงินการคลังด้านสุขภาพของสหราชอาณาจักร แคนาดา และอินโดนีเซีย ภายใต้กรอบการวิเคราะห์ความยั่งยืนทางการคลัง

ผลการศึกษาพบว่า ปัญหาสำคัญของประเทศไทยเกิดจากความไม่สมดุลเชิงโครงสร้างระหว่างการเติบโตของรายจ่ายด้านสุขภาพกับทรัพยากรทางการเงินที่มีอยู่ ขณะที่ประเทศตัวอย่างได้พัฒนากลไกการบริหารจัดการที่แตกต่างกันเพื่อรักษาความยั่งยืนของระบบสุขภาพ ได้แก่ การจัดซื้อเชิงยุทธศาสตร์ และการประเมินความคุ้มค่าของเทคโนโลยีทางการแพทย์ในสหราชอาณาจักร การควบคุมงบประมาณผ่านระบบ Global Budget ในแคนาดา และการบริหารระบบส่งต่อและการระดมแหล่งเงินทุนที่หลากหลายในอินโดนีเซีย

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การศึกษาสรุปว่า การปรับสูตรจัดสรรงบประมาณตามความเสี่ยงและภาระโรค การเสริมสร้างกลไกการจัดซื้อเชิงยุทธศาสตร์ การเพิ่มประสิทธิภาพการบริหารรายจ่าย และการพัฒนาแหล่งรายได้ที่หลากหลาย จะมีส่วนสำคัญในการเสริมสร้างความยั่งยืนทางการคลังของระบบหลักประกันสุขภาพถ้วนหน้าของไทยในระยะยาว โดยยังคงรักษาหลักการความเสมอภาคในการเข้าถึงบริการสุขภาพ

คำสำคัญ: หลักประกันสุขภาพถ้วนหน้า ความยั่งยืนทางการคลัง การเงินการคลังด้านสุขภาพ การเปรียบเทียบระบบสุขภาพ การจัดซื้อเชิงยุทธศาสตร์ ประเทศไทย

Introduction

Universal Health Coverage (UHC) has become a central objective of health policy and social development worldwide. Defined as ensuring that all individuals have access to essential healthcare services without suffering financial hardship, UHC is widely recognized as an important indicator of social equity, human development, and state capacity. While many high-income countries established universal healthcare systems during the post-World War II period, an increasing number of middle-income countries have adopted UHC as part of broader strategies to improve social protection and reduce inequality.

Thailand is widely regarded as one of the most successful middle-income countries in implementing UHC. Since the introduction of the Universal Coverage Scheme (UCS), commonly known as the “Gold Card” scheme, healthcare coverage has expanded to approximately 98 percent of the population (Hiscock, 2021). The Thai healthcare system has received international recognition for its accessibility, affordability, and quality of care. Beyond improving health outcomes, the expansion of healthcare coverage has contributed to poverty reduction, human capital development, and broader social welfare objectives.

Despite these achievements, concerns regarding the long-term fiscal sustainability of Thailand's UHC system have intensified in recent years. Public hospitals, particularly those operating under the Ministry of Public Health, have reported increasing financial deficits and accumulated losses. Rising healthcare expenditures associated with population ageing, the growing prevalence of chronic diseases, medical inflation, and the adoption of new healthcare technologies have placed significant pressure on existing financing mechanisms. Consequently, policymakers face a critical challenge: how to maintain universal access to healthcare while ensuring the long-term financial sustainability of the system.

Recent evidence suggests that these challenges are structural rather than temporary. The gap between actual healthcare costs and reimbursement rates has widened, creating financial strain for healthcare providers and raising concerns regarding the future viability of public healthcare institutions. As Thailand enters a rapidly ageing society, healthcare expenditure is expected to continue increasing, while fiscal resources remain constrained. The sustainability of Thailand's UHC system therefore depends not only on expanding financial resources but also on improving the efficiency and governance of healthcare financing arrangements.

Although previous studies have extensively examined healthcare access, equity, and service delivery under Thailand's UHC system, comparatively less attention has been paid to the question of fiscal sustainability. Existing research has largely focused on the achievements of universal coverage, whereas fewer studies have explored how healthcare systems can remain financially sustainable in the face of demographic and technological change. Moreover, limited comparative research has examined Thailand alongside other countries that have adopted different approaches to healthcare financing and expenditure management.

This study addresses this gap through a comparative analysis of healthcare financing systems in the United Kingdom, Canada, and Indonesia. These countries were selected because they represent different institutional approaches to financing universal healthcare while confronting similar challenges related to rising healthcare expenditure and fiscal pressure. By comparing their experiences, the study seeks to identify policy lessons that may strengthen the long-term sustainability of Thailand's healthcare financing system.

This study contributes to the literature in three ways. First, it shifts attention from the expansion of healthcare coverage to the challenge of sustaining universal healthcare over the long term. Second, it develops a comparative perspective on fiscal sustainability by examining how different healthcare systems balance access, cost control, and financial viability. Third, it proposes a Healthcare Sustainability Framework that integrates lessons from the United Kingdom, Canada, and Indonesia into a set of policy directions relevant to Thailand and other middle-income countries facing similar fiscal pressures.

Accordingly, the study seeks to answer the following research question: **How can Thailand strengthen the fiscal sustainability of its Universal Health Coverage system while maintaining equitable access to healthcare services?**

Literature Review and Analytical Framework

Fiscal sustainability has emerged as a central concern for universal healthcare systems worldwide. While Universal Health Coverage (UHC) seeks to ensure equitable access to healthcare services without financial hardship, maintaining such systems requires governments to balance expanding healthcare demands with available fiscal resources. Population ageing, technological advancement, and rising public expectations have increased healthcare expenditures across both developed and developing countries, creating growing pressure on public healthcare budgets.

The World Health Organization (WHO, 2010) defines health financing sustainability as the ability of a health system to secure sufficient and predictable financial resources to meet population health needs while ensuring financial protection and avoiding unsustainable fiscal burdens. Fiscal sustainability therefore extends beyond budgetary balance and encompasses the long-term capacity of healthcare systems to maintain accessibility, quality, and financial resilience.

Existing studies suggest that healthcare systems face a fundamental trade-off among access, quality, and cost containment. Although expanding healthcare coverage improves social welfare and equity, it simultaneously increases long-term expenditure commitments. Consequently, contemporary healthcare reforms increasingly emphasize strategic purchasing, efficient resource allocation, expenditure management, and revenue diversification as mechanisms for strengthening fiscal sustainability.

To evaluate these challenges, this study adopts the SAFE Framework developed by the Institute for Population and Social Research, Mahidol University, and the International Health Policy Program (2025). The framework conceptualizes fiscal sustainability through four interrelated dimensions: Sustainability, Adequacy, Fairness, and Efficiency. Sustainability refers to the long-term viability of healthcare financing arrangements; Adequacy concerns the availability of sufficient financial resources; Fairness emphasizes equitable access and financial protection; and Efficiency focuses on the effective allocation and utilization of healthcare resources.

The study employs a comparative perspective by examining healthcare financing systems in the United Kingdom, Canada, and Indonesia. These countries represent different institutional approaches to achieving universal healthcare while confronting similar challenges associated with rising healthcare expenditures and fiscal pressures. Comparison across these cases provides an analytical basis for identifying policy mechanisms that may contribute to strengthening the long-term fiscal sustainability of Thailand's Universal Health Coverage system.

Methodology

This study employs a qualitative comparative research design to examine the fiscal sustainability of Thailand's Universal Health Coverage (UHC) system and to identify policy lessons from selected international healthcare financing models. Given the study's objective of understanding institutional arrangements, financing mechanisms, and policy responses across different healthcare systems, a qualitative approach is appropriate for capturing contextual and structural differences that cannot be adequately explained through quantitative indicators alone.

The research relies primarily on documentary analysis and comparative policy analysis. Data were collected from policy documents, government reports, publications of international organizations, and academic literature relating to healthcare financing and fiscal sustainability. Key sources include reports from the World Health Organization (WHO), Thailand's National Health Security Office (NHSO), the United Kingdom's National Health Service (NHS), the National Institute for Health and Care Excellence (NICE), the Canadian Institute for Health Information (CIHI), and Indonesia's Social Security Administering Body for Health (BPJS Kesehatan).

Three countries—the United Kingdom, Canada, and Indonesia—were selected for comparative analysis. The United Kingdom represents a mature tax-funded healthcare system based on the Beveridge model, which influenced the development of Thailand's UHC system. Canada provides an example of a decentralized publicly financed healthcare model, while Indonesia represents a middle-income country that has recently expanded universal healthcare coverage through a mixed financing approach. Together, these cases provide diverse institutional experiences relevant to Thailand's fiscal sustainability challenges.

The analysis is guided by the SAFE Framework and focuses on four dimensions of healthcare financing sustainability: revenue generation, resource allocation, provider payment mechanisms, and cost-containment strategies. Comparative assessment of these dimensions enables the identification of institutional practices and policy mechanisms that may contribute to strengthening the long-term fiscal sustainability of Thailand's Universal Health Coverage system.

Findings and Discussion

Structural Challenges Facing Thailand's Universal Health Coverage System

The findings indicate that the principal challenge confronting Thailand's Universal Health Coverage (UHC) system is no longer the expansion of healthcare coverage but the long-term sustainability of healthcare financing. Although the Universal Coverage Scheme (UCS) has successfully extended healthcare access to approximately 98 percent of the population, increasing fiscal pressures have raised concerns regarding the ability of the system to maintain both service quality and financial stability.

A major source of fiscal pressure is the widening gap between actual healthcare costs and government reimbursement rates. Recent evidence indicates that inpatient treatment costs averaged approximately 15,900 baht per Adjusted Relative Weight (AdjRW) during 2023-2024, while reimbursement rates provided through the National Health Security Office (NHSO) ranged between 7,000 and 8,350 baht per AdjRW (Bureau of Health Insurance, 2024; NHSO, 2024). Consequently, hospitals have been required to absorb a substantial proportion of treatment costs, resulting in persistent financial deficits and growing operational pressures.

These financial pressures are reflected in the deteriorating fiscal condition of public hospitals. Recent reports indicate that nearly 1,000 public hospitals experienced negative operating balances or accumulated losses during the 2024–2025 fiscal period (Wangthititheerakul & Sirisunthon, 2025). Delays in reimbursement payments have further exacerbated liquidity constraints, limiting the ability of healthcare providers to meet operational expenses and maintain service capacity. Such conditions raise important concerns regarding the long-term resilience of Thailand's healthcare delivery system.

Demographic change represents an additional structural challenge. Thailand is rapidly transitioning toward an ageing society, increasing demand for healthcare services and long-term treatment of chronic non-communicable diseases (NCDs). Previous studies suggest that healthcare expenditure among older adults may be three to five times higher than among the working-age population due to the need for continuous treatment and long-term care (Chucherd & Puapairoj, 2020). As the proportion of elderly citizens continues to increase, healthcare expenditure is expected to grow accordingly.

At the same time, advances in medical technology and rising pharmaceutical costs have contributed to medical inflation that frequently exceeds general inflation rates. While technological innovation has improved healthcare outcomes, it has also increased expenditure obligations for healthcare providers and public financing agencies. Combined with policies that have expanded healthcare benefits and service utilization, these developments have intensified fiscal pressures on the healthcare system.

Taken together, these findings suggest that Thailand's fiscal challenges are structural rather than temporary. The sustainability of the UHC system depends not only on increasing financial resources but also on reforming institutional arrangements governing resource allocation, expenditure management, and healthcare financing.

Comparative Analysis and Lessons for Thailand

To identify potential approaches for strengthening fiscal sustainability, Thailand's healthcare financing system was compared with those of the United Kingdom, Canada, and Indonesia. Although all four countries pursue the common objective of universal healthcare coverage, they differ substantially in their financing arrangements, provider payment systems, and expenditure management strategies. These differences provide useful insights into alternative approaches to balancing healthcare access, cost control, and long-term fiscal sustainability.

Table 1: Comparative Characteristics of Healthcare Financing Systems

Dimension	Thailand	United Kingdom	Canada	Indonesia
Main Revenue Source	General taxation	General taxation	Federal and provincial taxation	Insurance contributions and government subsidies
Provider Payment	Capitation and DRGs	Capitation and salaries	Fee-for-service and Global Budget	Capitation and DRGs
Cost Control Mechanism	Drug price negotiation and HTA	NICE and strategic purchasing	Global budgeting	Gatekeeping and referral system
Main Fiscal Challenge	Ageing society and hospital deficits	Technology costs and fiscal pressure	Waiting lists and expenditure growth	Financing deficits and regional disparities

The comparative analysis demonstrates that no healthcare system has fully resolved the challenge of balancing universal access, service quality, and fiscal sustainability. Nevertheless, the experiences of the United Kingdom, Canada, and Indonesia provide useful lessons for Thailand.

The United Kingdom emphasizes strategic purchasing and evidence-based resource allocation through institutions such as NICE, which evaluates healthcare technologies according to cost-effectiveness criteria before their adoption. This approach highlights the importance of allocating healthcare resources based on value and population needs rather than expanding coverage alone.

Canada focuses on expenditure discipline through decentralized budget management and global budgeting mechanisms. While this approach has strengthened fiscal control, it has also generated concerns regarding waiting times and service accessibility, illustrating the need to balance financial sustainability with healthcare quality.

Indonesia combines government subsidies with insurance contributions and employs gatekeeping and referral systems to control healthcare utilization. Its experience demonstrates the potential benefits of diversified financing arrangements and stronger demand-side management within a middle-income country context.

Three key lessons emerge from the comparison. First, healthcare financing should increasingly reflect demographic and epidemiological realities through risk-adjusted allocation mechanisms. Second, fiscal sustainability requires stronger strategic purchasing and expenditure management to improve the efficiency of healthcare spending. Third, long-term sustainability may require greater diversification of financing sources to reduce reliance on general taxation alone.

Overall, the findings suggest that strengthening risk-adjusted resource allocation, strategic purchasing, expenditure management, and financing diversification would improve the long-term fiscal sustainability of Thailand's Universal Coverage Scheme while preserving equitable access to healthcare services.

Conclusion and Policy Implications

This study examined the fiscal sustainability challenges confronting Thailand's Universal Health Coverage (UHC) system through a comparative analysis of healthcare financing arrangements in the United Kingdom, Canada, and Indonesia. The findings indicate that Thailand's primary challenge is not the expansion of healthcare coverage but the growing mismatch between healthcare expenditure and available fiscal resources. Rising healthcare costs, population ageing, and technological advancement have intensified fiscal pressures and contributed to increasing financial deficits among public hospitals.

The comparative analysis demonstrates that while no healthcare system has fully resolved the challenge of balancing universal access, service quality, and fiscal sustainability, valuable lessons can be drawn from international experience. The United Kingdom highlights the importance of strategic purchasing and evidence-based resource allocation, Canada demonstrates the role of expenditure discipline through budgetary control, and Indonesia illustrates the benefits of financing diversification and gatekeeping mechanisms.

Based on these findings, three policy priorities emerge for Thailand. First, resource allocation mechanisms should be strengthened through risk-adjusted funding formulas that better reflect demographic structure and disease burden. Second, strategic purchasing and health technology assessment should be expanded to improve the efficiency of healthcare spending. Third, policymakers should explore diversified financing arrangements capable of enhancing fiscal resilience while preserving equitable access to healthcare services.

This study has several limitations. The healthcare systems examined differ substantially in institutional design, economic conditions, and governance structures, limiting the direct transferability of policy lessons. In addition, the analysis relies primarily on secondary data sources and documentary evidence. Future research should examine the role of digital health technologies, artificial intelligence, and innovative financing mechanisms in supporting the long-term sustainability of healthcare systems in ageing societies.

Ultimately, sustaining Thailand's Universal Coverage Scheme will require a balanced approach that combines efficient resource allocation, prudent expenditure management, and sustainable financing. Such reforms are essential not only for maintaining fiscal stability but also for preserving universal healthcare as a cornerstone of Thailand's social development.

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