



Narrative Review on Universal Health Coverage in Thailand and China from the Lens of Social Determinants of Health Theory

Yiting Kang^{1*}, Rapeepong Suphanchaimat^{2,3}, Saruttaya Wongsuwanphon²

1 School of Health Science, Mae Fah Luang University, Thailand

2 Division of Epidemiology, Department of Disease Control, Ministry of Public Health, Thailand

3 International Health Policy Program, Ministry of Public Health, Thailand

*Corresponding author, email address: mccauleyzej22@gmail.com

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Abstract

This article through the literature review method briefly compares universal health coverage (UHC) in Thailand and China, highlighting their strategies and challenges in achieving UHC through the lens of social determinants of health: a) health financing design and sustainability, b) accessibility of healthcare resources, and c) participatory and responsive governance. While Thailand mainly utilizes a tax-based approach, China employs a health insurance model. Both countries have achieved high insurance coverage. However, some challenges exist. The unmet need for health services due to long waiting times has been a key concern in Thailand, whereas financial hardship from receiving care was a critical concern in the case of China. Thailand has created a mechanism to allow a wide range of stakeholders to participate in the UHC design to ensure responsive governance. In contrast, China has not yet formed comprehensive legal grounds for participatory and responsive governance on UHC. Their experiences and encountered obstacles can offer valuable lessons on how middle-income nations can advance towards UHC, highlighting the critical need for ongoing improvements in health systems to tackle the existing and new health challenges due to the change in population demographics and the continuing increase of population healthcare demand.

Keywords: universal health coverage, social determinants of health theory, Thailand, China

Introduction

Universal health coverage (UHC), as one of the sustainable development goals 3.8, is critical for ensuring that all individuals are able to access necessary health services without facing financial hardships.¹ In middle-income countries, the achievement of UHC is confronted with distinctive challenges such as issues related to financing mechanisms, unequal distribution of healthcare resources, and the prevalence of informal economic activities.² Nonetheless, through effective policy formulation and innovative financing strategies, some countries can surmount the obstacles and gradually progress toward UHC. Thailand and China are among the successful cases despite many

challenges remain, showing that middle-income countries can make positive effort towards UHC.^{3,4}

Thailand achieved UHC with the introduction of the Universal Coverage Scheme (UCS) in 2002. Before the UCS, Thailand implemented the Civil Service Medical Benefits Scheme in 1980 and the Social Security Scheme in 1990. These three basic schemes covered 98.5% of the population in 2015 (Table 1).⁵ In contrast, China's process of achieving UHC has been more gradual, beginning with a series of reforms in the late 1990s and early 2000s, with the implementation of Urban Employee Basic Medical Insurance in 1998 and Resident Basic Medical Insurance in 2007 which cover 75% of the population (Table 2).⁶ Subsequently in 2018, UHC had been achieved, with the insurance coverage remaining over 95% annually.⁷

Table 1. Key characteristics of the basic health insurance schemes in Thailand^{8,9}

	Universal Coverage Scheme (2002)	Social Security Scheme (1990)	Civil Servant Medical Benefit Scheme (1980)
Beneficiaries	Thai citizen	The employed in the private sector	Government employees and dependents
Premium	Tax-based financing	A fixed percentage of the employee's salary (varies, typically around 5%, maximum \$21)	Tax-based financing
Funding source	Government budget	Contributions (employee, employer, government)	Government budget
Length	Lifetime	As long as employed and contributing	Lifetime for employees; vary for dependents
Benefit	A broad range of services including outpatient and inpatient care, preventive, promotive, curative, rehabilitative, emergency services, other high-cost care, etc.*		

*Few medicines or operation lists may differ across schemes

Table 2. Key characteristics of the basic health insurance schemes in China^{10,11}

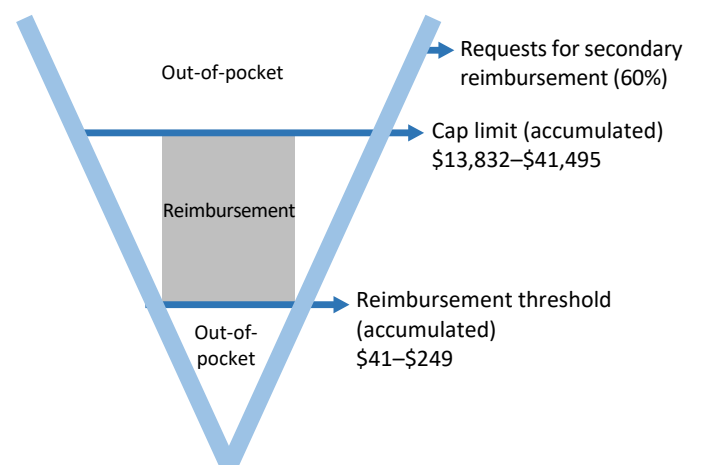
	Urban Employee Basic Medical Insurance (1998)	Resident Basic Medical Insurance (2007)
Beneficiaries	Employees	Non-working residents (children, students, elderly, self-employed, and others)
Premium	Employee (2%) and employer (8%) payroll	Individual (\$53), government subsidy (\$94)
Funding source	Contributions (employee, employer, government)	Individual premium, government budget
Length	Men pay 25 years, women 20 years; lifetime benefits after retirement	Pay for one year, insured for one year
Benefit	≈85% reimbursement	≈70% reimbursement

Although Thailand and China have both achieved UHC, the models are different. Thailand primarily operates the national health insurance model, which is predominantly tax-based. China is chiefly the social health insurance model, proportionally contributed by citizens, employers, and the government. The reimbursement standards in China are relatively complex with varying reimbursement ratios depending on the type of insurance, the level of the hospital, and the provinces.¹² Figure 1 is an example of this complexity. The annual out-of-pocket expenses in the designated healthcare facilities that exceed the reimbursement threshold and within the cap limit are reimbursed according to specific rates that vary by province. In cases of catastrophic illness, annual expenses that surpass the cap limit can apply for secondary reimbursement, which is approximately 60% without a cap limit.

There have been numerous comparative studies on UHC, although the comparative research focusing on Thailand and China has been relatively scarce. The cases of Thailand and China demonstrate how developing countries can reach UHC through effective policy design and implementation with limited resources. Moreover, although there are differences in political systems and governance structures between

the two countries, both UHCs are driven by strong governmental initiatives.

This study therefore aimed to understand and evaluate the strategies and challenges in achieving UHC in Thailand and China through the lens of social determinants of health theory. By comparing the UHC in the two countries, it could reveal how different government structures influence UHC, which can provide insights into global health governance and the achievement of sustainable development goals.

**Figure 1. Reimbursement criteria of the basic health insurance schemes in China, 2024¹³**

Methods

This study used a narrative review approach. The article search was done between 28 Jan to 13 Apr 2024 and the most recent update was on 16 Jun 2024. The sources of literature included peer-reviewed articles, and documents in PubMed and China National Knowledge Infrastructure (CNKI) databases published before January 2024. The inclusion criteria were: a) articles containing information about UHC in Thailand and/or China; b) articles on UHC in Thailand published between 2002 and 2024 in English; and articles on UHC in China published between 2018 and 2024 in either English or Chinese. Note that, for the Thai UHC, this study focused on the UCS—the main public insurance arrangement that covers the majority of the Thai population. The years 2002 and 2018 were chosen as the baseline for the literature search based on the timing of the implementation of UCS in Thailand and the achievement of UHC in China. Exclusion criteria were: a) documents not related to UHC in Thailand and/or China; b) documents not in English or Chinese. The Boolean operator ‘OR’ was used to combine various conceptual terms of “universal health coverage [Title/Abstract]” and subsequently the Boolean operator ‘AND’ was used to combine the results of the UHC search with “Thailand” and/or “China”. This study descriptively analyzed the contents of the selected articles based on the following aspects: a) health financing design and sustainability, b) accessibility of healthcare resources, and c) participatory and responsive governance.

Results

A total of 814 articles were retrieved. From the perspective of social determinants of health, 22 studies met the inclusion criteria. These studies explored UHC in Thailand (n=12) and China (n=10). Among these, 20 papers were in English and 2 were in Chinese (Figure 2).

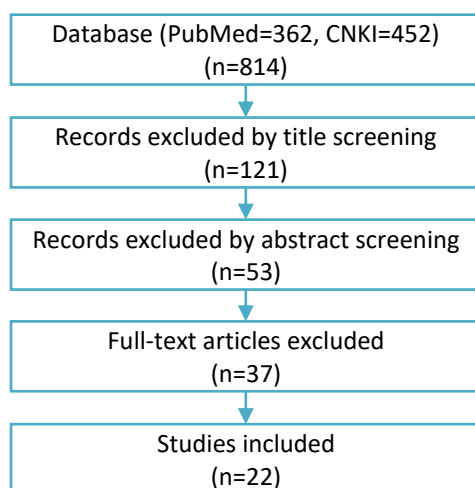


Figure 2. Flow diagram of article selection

Health Financing Design and Sustainability

From the financing mechanism perspective, UCS primarily utilizes a tax-based financing model. The Thai government's domestic health spending, strong political commitment, and the historical precedence of tax-funded health benefit programs were key to implementing UCS, which ensures adequate resources, increases transparency, and limits discretionary decisions in budget allocation.³ Conversely, the implementation of Residents Basic Medical Insurance in China places greater emphasis on a social medical insurance system with sharing medical expenses through a diversified source of funds.¹⁴ Considering China's vast and diverse population base, as well as the reality of uneven economic development, this mechanism attempts to meet the needs of different groups through various insurance plans.¹⁵

In terms of the mode of provider payment, China used to employ the fee-for-service which directly linked the number of medical services to the income of medical institutions and physicians, which might have led to overtreatment elevating the expenditure and out-of-pocket cost.¹⁶ However, insufficient monitoring had complicated the fee-for-service design in previous years.¹⁷ To tackle the issue, the recent healthcare reform has shifted the payment method to diagnosis-related groups, motivating more efficient and reasonable medical services.¹⁴ Also, drug collective procurement policy has been applied to control the expenditure.^{18,19}

The payment method is relatively mature in Thailand compared to China. Thailand mainly employs the annual age-adjusted capitation payment system and drug collective procurement was implemented early on. It is one of the key policy instruments for Thailand to demonstrate favorable results in UCS.²⁰ Therefore, well-designed strategic purchasing contributes to efficiency, cost control, and equity.²¹

Accessibility of Healthcare Resources

Both China and Thailand have largely achieved high insurance coverage, which addresses “all individuals” in the definition of UHC. However, this does not mean all individuals can access healthcare without barriers. Thailand's annual prevalence of unmet healthcare needs remained below 3% with a high overall consumer satisfaction.^{22,23} In contrast, in China, the incidence of unmet outpatient and inpatient needs due to economic barriers stood at about 5% and 19%, respectively.²⁴ Compared to Thailand, especially for inpatients, the unmet needs in China are higher, despite the current results being much better than before.²⁵

The causes of unmet needs differ significantly. In Thailand, the primary reasons are long waiting times and distance to healthcare facilities, and the cost of treatment is not a significant barrier and is less of a barrier than that posed by geographic barriers.^{26,27} The UCS has reduced average out-of-pocket expenses by 28%, and is credited for the significant reduction in catastrophic health expenditure and impoverishment rates.^{28,29} In China, the most common reasons for unmet needs are insufficient money and the perception that treatment is unnecessary due to the non-severity of the condition, indicating that economic factors are still predominant.³⁰ Thus, more efforts need to be invested to meet the ultimate goal of UHC.³¹

Participatory and Responsive Governance

Participatory and responsive governance is essential for UHC, ensuring responsiveness to public needs and improved quality of healthcare services through inclusive decision-making.³² In Thailand, citizen participation is explicitly institutionalized in the UCS, with 23 legislative sections for participatory governance and 18 sections for responsive governance. For example, Thai law requires that representatives from civil society or non-governmental organizations must be included in the UCS management committee to ensure that public views and interests are reflected and taken into account. Moreover, public access to information on program governance is ensured through public information and information dissemination systems to increase transparency and responsiveness to the public.³³

China has not yet formed a comprehensive and systematic legal system for the health insurance system. The descriptions of participatory and responsive governance about UHC are scattered in different laws, regulations, and policies without specifically identifying the actionable rights and modalities.^{34,35} In China, civil society, other parties, and non-governmental organizations participate in health reform, policy decision-making, and monitoring through the National Committee of the Chinese People's Political Consultative Conference.³⁶ Citizen participation is usually achieved through public consultation and collection of opinions.³⁵ The mass media have been generally active and participatory in the new healthcare reform, and have played an important role in expanding citizen policy participation.³⁷ Regarding responsive governance, the government opened internet platforms to extensively solicit public opinions in this healthcare reform, receiving over 30,000 feedback and suggestions, but how these feedback and suggestions were integrated into the new regulation and policy was not disclosed.³⁸

Discussion

Thailand and China have some experiences worth learning for achieving UHC, as well as some challenges that need attention.

Thailand's experience in achieving UHC is primarily reflected in the following aspects. First, Thailand has continuously expanded the volume of the health workforce before and during the UHC era. The collaborative projects to increase the production of rural doctors and the one district one doctor programs are examples of health workforce policies which enhance medical service capabilities in remote and rural areas.³⁹ These policies also involve prioritizing primary healthcare as the core of UHC and promoting primary care units to shift medical services from hospitals to community-based settings to enhance the accessibility and quality of primary healthcare services.^{40,41}

Second, Thailand's experience has demonstrated the effectiveness of cross-sectoral collaboration, like the Collaborative Projects to Increase the Production of Rural Doctors and One District One Doctor are jointly managed by the Ministry of Public Health and the Ministry of Education.³⁹ Consultative meetings that involved policymakers, administrators, and health practitioners to discuss the mismatch between medical service demand and supply were conducted.⁴¹

Last, strong political commitment and active participation of health personnel were key to Thailand's successful implementation of UHC.⁴² Since 2001, the Thai government has provided ongoing policy support and financial investment for health system reform, which has been crucial for expanding coverage of basic medical services.⁴⁰ The active participation of social organizations has played a significant role in advocating for health policies and reforms, facilitating broader social acceptance and participation.⁴²

For China, first, its experience in achieving UHC is primarily characterized by strong political commitment and policy implementation, which is like the Thai case. The clear political will to achieve UHC is one of the most crucial prerequisites.⁴³ The government's political commitment and effective policy implementation ensure that health reforms continue to progress and effectively respond to needs.^{44,45} Additionally, strong government intervention and funding are key to achieving a high coverage rate.^{12,43,46}

Second, primary healthcare is a central and crucial step in advancing UHC.^{43,45} China has enhanced the accessibility and affordability of medical services by increasing investments from both the government and the private sector, expanding the service capacity of

grassroots medical institutions, and improving the quality of primary healthcare services.^{43,44,46} Simultaneously, there has been extensive application of information technology in medical management and service provision to enhance the efficiency and level of medical services.⁴⁵

Last, health policies have been integrated with other social policies to address complex social health issues such as poverty alleviation and strategies to address an aging society.⁴⁵ China does not solely focus on individual sectors but also promotes a dynamic balance among medical services, health insurance, and pharmaceuticals which help to build a coordinated healthcare system.⁴³ Moreover, China has implemented a series of policies to achieve UHC since 2005, and the healthcare reform has been ongoing, highlighting the importance of maintaining policy coherence and continuity throughout the transformation of the healthcare system.^{12,45}

However, achieving UHC is a long-term journey and challenges remain. One of the challenges Thailand faces is the burden of non-communicable diseases (NCDs), which has emerged as a longstanding challenge for the country, and families may face catastrophic health expenditures due to the costs of treatment.⁴² Another challenge is the pressure of aging, compounded by the increasing burden of NCDs, which poses significant concern on Thailand's fiscal sustainability.⁴² This challenge necessitates a shift in the healthcare model from hospital-centered care to non-hospital settings and to create a platform that provides better facilitates the integration of all levels of medical services.^{41,42} The dire need to improve the quality of healthcare services, particularly in disease prevention and health promotion, is also an ongoing challenge for Thailand's primary healthcare.⁴⁰ Despite, a large number of medical professionals produced each year, Thailand still experiences mismatches between the increasing population health needs and the number of workforce available, let alone the challenge in ensuring quality and consistency of training programs across regions.³⁹⁻⁴¹ Inequitable workforce distribution and how to attract and maintain health professionals in rural public services is of significant concern.³⁹

Some challenges China UHC is facing include, first, the financial hardship incurring on the insurance beneficiaries.¹² This problem is more severe in the management of NCDs and among low-income individuals.^{44,46} Although the out-of-pocket proportion of medical expenses has decreased, the risk of impoverishment and relapse into poverty due to illness still exists.⁴⁵

Second, significant disparities still exist in service provision, quality, and equity between regions.^{12,43-45} Although the coverage of healthcare services has expanded, service quality, especially in the management of NCDs, still needs improvement.⁴⁵ Since China's healthcare system is highly dependent on hospitals, services are primarily treatment-oriented and lacking sufficient preventive and primary care measures.⁴⁶

Last, despite the vision of Healthy China 2030, the coordination between sectors such as health, development, transportation, and education, is inadequate in actual policy implementation, affecting the execution of comprehensive health policies.⁴⁶ In the process of healthcare reform, public participation and voices are still insufficient. It is necessary to further strengthen mechanisms for public involvement in policy-making.⁴³

This study has some limitations. The use of narrative review, despite being applicable to the study objective, means the review is subject to selection bias compared to systematic review or meta-analysis, which are mostly employed when the review objective is more focused. Besides, as UHC depends on health system design which is subject to change according to policy fluctuations, the challenges and successes identified in this study are not time-invariant. Thus, the readership should interpret the results with caution, while taking into account differences in the political context between the two countries.

Conclusion

Thailand has utilized a tax-based financing model, while China has implemented a mixed financing approach to progressively advance its UHC. Although both countries have achieved high coverage rates, they continue to face challenges in ensuring financial sustainability, equitable distribution of resources, and accessibility to healthcare services. Particularly in China, reforms in payment methods, centralized drug procurement policies, and the establishment of a tiered diagnosis and treatment system have been critical for more effectively control of medical costs and enhance the efficiency of healthcare services.

The realization of UHC extends beyond merely establishing a medical service framework. It encompasses efforts to improve the accessibility and affordability of healthcare services, elevate the quality of care, and enhance the financial sustainability of health systems. Consequently, even nations that profess to have achieved UHC should continuously refine and adjust their healthcare systems to address emerging health challenges and the evolving health needs of their populations.

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Conflict of Interest

No conflicts of interest are associated with the material presented in this paper.

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