Review Article

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Comparing Thailand and UK's Reimbursement Policies: Focus on High-Value Drug List for Cancer

Peatiphat Bhoothookngoen,[1, 2], Siriwaranya Khansilarchaipak,[1]

[1]Doctor of Pharmacy, Faculty of Pharmaceutical Sciences, Khon Kaen University, Thailand

[2]School of Information Technology and Innovation, Bangkok University,Thailand

Correspondence: Peatiphat Bhoothookngoen, Pharm.D., School of Information Technology and Innovation, Bangkok University, Main Campus 9/1 Village No.5, Phaholyothin Road, Klong Nueng Sub-district, Klong Luang District, Pathumthani Province 12120, Thailand, Phone: +66905657256, Email: peatiphat.bhoo@bumail.net

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Abstract

This review's objective to analyze Thailand's drug reimbursement and patient access in comparison to the United Kingdom's (UK) universal health coverage system, with a focus on evidence-based reimbursement for fiscal stability. Materials and Methods, a comparative analysis was conducted, utilizing a random search of the latest regulations and several sources, employing the most relevant keywords of reimbursement policy, high-value drug, national list of medicine, Thailand, and United Kingdom. Thematic alignment and differentiation between Thailand and the UK were explored. Finding, Thailand's healthcare system relied on three insurance schemes, with rising per capita health spending and evolving trends compared to the UK. The National Essential Drug List (ED) and Hospital Drug List (HDL) ensured equitable medication access, alongside the Health Technology Assessment (HTA) and drug reimbursement policy. The inclusion of targeted and biological drugs in the High-Value Drug List for the Oncology and Hematology Program was highlighted. Government reference pricing mechanisms were explored, revealing differences impacting patient access. Suggestion, Thailand's comprehensive drug reimbursement framework, including the OCPA program, exemplified efforts to manage costs effectively and expand access to high-value drugs. In contrast, the UK maintained universal coverage under the NHS, with mechanisms like the PPRS and IFR ensuring reasonable pricing and equitable access. However, variations existed in patient access to high-value drugs, influenced by medical conditions and healthcare scheme affiliation. Streamlining pre-authorization processes and enhancing collaboration with pharmaceutical companies were recommended to improve access and affordability.

Keywords: Universal coverage, Patient access, Cancers, Reimbursement

Introduction

This review embarked on a comprehensive analysis of the current landscape of drug reimbursement and the accessibility of essential therapeutic interventions, particularly in cancer care by the high-value drugs. Drawing inspiration from the universal health coverage system in Thailand and the United Kingdom (UK), this inquiry is oriented towards elucidating potential avenues for enhancement within the healthcare context. This review aimed to assess the current standpoint, particularly within the purview of public health policy, and identify areas where improvements can be made. Additionally, the UK has a long history[1] since 1948 of developing and adapting policies for drug reimbursement and patient access. Analyzing these policies can provide valuable insights for Thailand on how to manage the high costs of cancer treatment while ensuring patient access.

Situating this inquiry within the framework of Thailand's commendable universal health coverage system, which extended its protective mantle over approximately 97% of the population[2], three pivotal health insurance schemes come into focus: the Civil Servant Medical Benefit Scheme (CSMBS), the Social Security Scheme (SSS), and the Universal Coverage Scheme (UCS). These schemes constituted cornerstone pillars in ensuring healthcare accessibility for all strata of society. Diligent adherence to the implementation of evidence-based protocols in drug reimbursement is imperative. Such commitment optimized the allocation of fiscal resources and serves as a bulwark against potential budgetary exigencies.

Turning attention to the prevalence of cancers, a global panorama revealed that 2020 witnessed an excess of 18 million cancer diagnosed, manifesting at an age-standardized rate of 190 per 100,000 individuals. Comparative examination underscored the existence of notable variations among neighboring Southeast Asian nations: Vietnam (159 per 100,000), Laos (164 per 100,000), Thailand (162 per 100,000), the Philippines (161 per 100,000), Myanmar (133.6 per 100,000), Malaysia (143 per 100,000), Indonesia (139 per 100,000), Singapore (230 per 100,000), Cambodia (133 per 100,000), and Brunei (220 per 100,000). The UK grappled with a considerably higher rate of 296 per 100,000 individuals[3, 4, 5]. Within the diverse tapestry of Thailand's demographic composition, the Department of Medical Services has identified the quintet of prevailing cancers: Hepatocellular and Cholangiocarcinoma, Lung cancer, Breast cancer, Colorectal cancer, and Cervical cancer[2].

Materials and Methods

In this exploration, performing in the last quarter of 2023, the research endeavor was firmly anchored in the aspiration of shedding light on refining drug reimbursement practices, with a focus on the high-value drugs for cancer in aspect of national essential list of drugs, expenditures, health technology assessment (HTA), reimbursement policy, and patient access. Through comparative analysis using random search of latest regulations and several sources and per references, using the most relevant keywords of reimbursement policy, high value drug, national list of medicine, Thailand, universal coverage, patient access, cancers, and United Kingdom. The study delved into the thematic alignment and differentiation between Thailand and the United Kingdom.

Findings

Health Expenditure

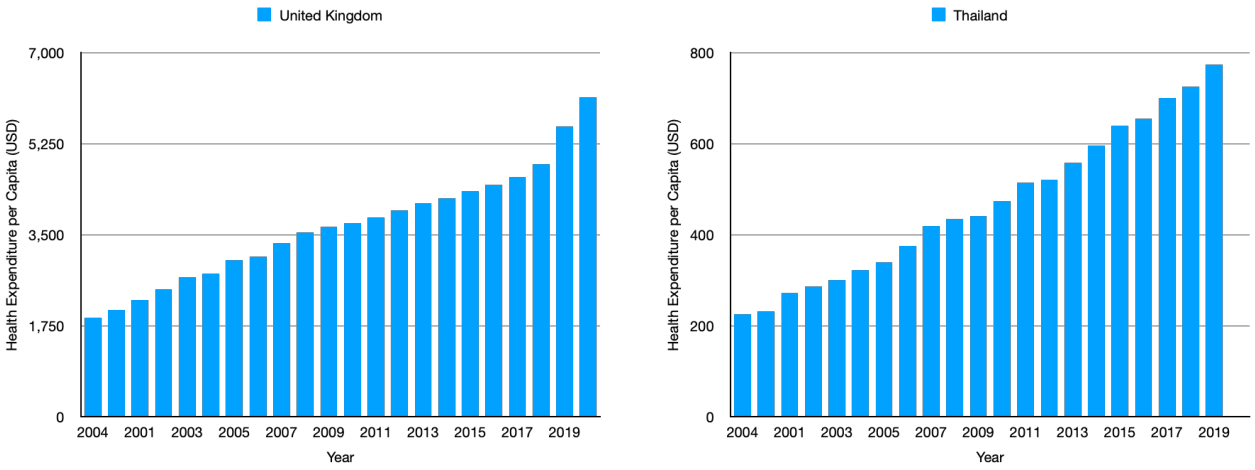

Figure 1. Health expenditure in Thailand vs. UK.[6, 7]

The growth in per capita health expenditure in Thailand has been substantial, more than doubling since 2000[6]. In contrast, the UK has witnessed a three-fold increase in health expenditure during the same period in Figure 1, underscoring the evolving nature of healthcare financing and its implications for both nations[7]. These trends in health expenditure bear significant implications for understanding the financial dynamics of healthcare systems and their sustainability over time. In examining Gross Domestic Product (GDP) as a relevant economic indicator, the United Kingdom has experienced a slight increase, rising from around 30,000 USD to 45,000 USD from 2000 to 2022[8]. In contrast, Thailand's GDP for the same period has grown

from about 2,000 USD to slightly more than 6,000 USD in Figure 2[9]. This divergence in GDP growth is noteworthy when considering the healthcare expenditure trends in both countries. These variations in health expenditure and GDP growth highlight the differing economic landscapes and raise essential questions about allocating financial resources within their healthcare systems. Such insights are crucial for policymakers and stakeholders in making informed decisions regarding healthcare financing and ensuring the sustainability of healthcare systems in the face of evolving economic dynamics.

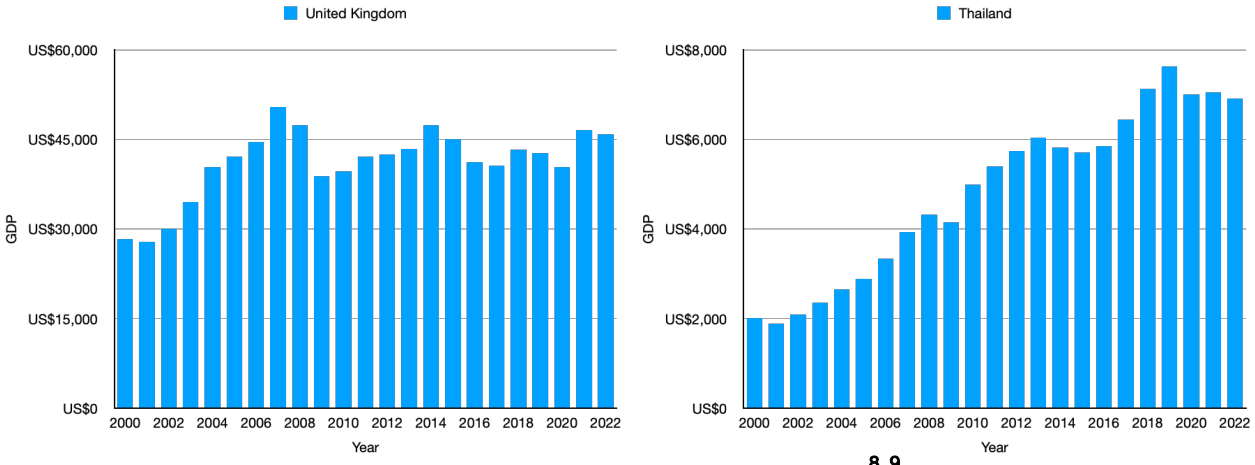

Figure 2. Gross domestic product (GDP)[8, 9]

National Essential Drug List (ED) and Hospital Drug List (HDL)

ED and HDL hold significant importance within the healthcare system of Thailand, particularly in the context of governmental health insurance schemes. These lists served as authoritative compendiums of pharmaceuticals approved for reimbursement when treating patients in Thai government hospitals, ensuring equitable access to essential medications with a rationale for drug use and safety.

National Essential Drug List

The ED, introduced in 1981, has undergone continual refinement to adapt to changing medical landscapes. Its establishment was a watershed moment in Thailand's healthcare policy, signifying a commitment to provide essential medicines to the population. In 1986, the government introduced reference prices for ED drugs, guided by Cabinet Resolution[10]—this pricing mechanism aimed to balance affordability and quality, ensuring that essential medications remained accessible to all.

The selection process for inclusion in the ED is methodical and meticulous. It involved comprehensive data collection, rigorous analysis, and thoughtful consideration of results. Drugs were subjected to scrutiny based on the ISafE criteria—Information, Safety, Administration restriction, frequency of drug administration, and Effectiveness[11]. These stringent criteria guarantee that only medicines meeting high safety, efficacy, and cost-effectiveness standards find their place in the ED. Consequently, patients receive therapeutically effective and economically sustainable medications in the Thai context.

Hospital Drug List

The HDL, consisting of an extensive array of medications, was a vital resource for government hospitals across Thailand[12]. Its purpose extends beyond drug availability; it ensures that healthcare facilities are equipped with medically appropriate medicines and in line with established treatment protocols. With the HDL as a reference, healthcare providers can offer standardized, evidence-based care to patients, promoting consistency and quality in medical practice.

These lists were indispensable components of the Thai healthcare landscape, playing a pivotal role in the sustainability of the healthcare system. They served as cornerstones for the three universal healthcare schemes in Thailand, guaranteeing that the costs of essential medications are covered. This comprehensive approach to healthcare financing aligned with Thailand's commitment to providing quality healthcare, regardless of socioeconomic status.

Health Technology Assessment (HTA)

HTA is a pivotal component of healthcare decision-making globally. Thailand has officially embraced this approach since 2002, establishing the Health Intervention and Technology Assessment Program (HITAP) under the aegis of the National Research Council of Thailand[13]. HITAP's mission is to rigorously evaluate the cost-effectiveness of health technologies to inform the inclusion process within the National Essential Drug List (ED). The ED listing procedure necessitates forming an expert working group tasked with conducting a comprehensive appraisal of the health technology under consideration for inclusion. This assessment encompassed a multifaceted evaluation containing clinical efficacy, safety, economic feasibility, and the overall impact on the healthcare system. The manufacturer’s request for an appraisal channel has not been implemented.

Drawing a parallel with the United Kingdom, the National Institute for Health and Care Excellence (NICE) similarly appraises health technologies submitted by manufacturers. The primary focus of these appraisals is to ascertain the cost-effectiveness of new technologies, ensuring that the introduction of such technologies aligns with the principles of value for money within the healthcare system[14]. Notably, patient access schemes may come into play during the final appraisal stages before price negotiation and guideline implementation. These schemes aim to balance the cost-effectiveness of technology and patient access, serving as a pivotal tool in the overall decision-making process.

Drugs Reimbursement Policy

In Thailand's drug reimbursement context, a comprehensive framework governed the eligibility of medications for reimbursement under the purview of all three health insurance schemes[15, 16]. Within this framework, the ED serves as a key reference point, as all items listed are automatically eligible for reimbursement. However, it is essential to note that non-ED medications can also be considered for reimbursement, contingent upon a sound medical rationale provided by the attending physician. Hospitals are responsible for submitting claims information to relevant authorities and entities, ensuring a streamlined process. For high-value drug reimbursements in Thailand, a distinct feature emerges whereby the CSMBS group can access the Oncology Prior Authorization (OCPA) program[15], albeit under specific and restricted conditions. This targeted approach aims to manage the costs associated with high-value drugs, thereby safeguarding the sustainability of the healthcare system.

Comparative Analysis with the UK maintained a system to identify high-cost drugs through the High-Cost Drugs Commissioning List[17, 18]. This list served as a mechanism for recognizing medications requiring direct reimbursement by the National Health Service (NHS), while Thailand only CSMBS can access additional items via OCPA. Additionally, the UK offered an avenue known as the Individual Funding Request (IFR) for non-listed drugs, ensuring that patients have recourse to seek reimbursement for medications that fall outside the established lists.

Inclusion of Targeted and Biological Drugs for Oncology and Hematology in the ED

Within the ambit of the ED[19], a specific subset comprised eight notable targeted and biological oncology and haematology drugs. These medications encompass Bevacizumab, Dasatinib, Erlotinib, Imatinib mesilate, Nilotinib hydrochloride, Rituximab, Tocilizumab, and

Trastuzumab. All these medications fall under the Jor 2 category, signifying that their prescription mandates prior authorization. This requirement underscores these drugs' gravity and specialization, necessitating careful evaluation and clinical justification before patient administration.

Targeted and Biological Drugs for Oncology and Hematology as Listed in the OCPA Program but Unlisted in the ED

An array of targeted and biological oncology and haematology drugs was featured in the OCPA program, even though they do not hold a position within the ED (20). This roster comprises Atezolizumab, Bortezomib, Ceritinib, Gefitinib, Osimertinib, Panitumumab, Pazopanib, Pertuzumab, Ponatinib, Ribociclib, Rituximab, Sorafenib, Sunitinib, and Trastuzumab. However, it is essential to highlight that access to the OCPA program for these drugs is exclusively granted to the CSMBS group. This selective access is predicated on specific criteria or considerations, which could range from cost containment to clinical appropriateness.

Including and managing targeted and biological oncology and haematology drugs within the Thai healthcare system for the CSMBS group involve a dual-tiered approach. The ED surrounds a subset of these medications, subject to stringent authorization prerequisites due to their specialized nature. Meanwhile, the OCPA program extends access to an expanded list of such drugs, underlining the nuanced and selective considerations guiding their inclusion and reimbursement. These dual mechanisms reflect the healthcare system's dedication to balancing accessibility and responsible drug management in the context of advanced and specialized therapies.

Government Reference Price Mechanisms for Pharmaceuticals

In Thailand, determining reference prices for pharmaceuticals falls within the purview of the National Drug System Development (NDSD) Committee[21]. Establishing these reference prices is guided by multifaceted criteria enclosing several vital components. These include cost-plus pricing, which accounts for the actual cost of production and distribution, ensuring that prices remain rooted in economic reality. Additionally, a profit ceiling mechanism is implemented to prevent excessive profit margins. Comparative pricing, an essential aspect of the process, involves benchmarking drug prices against those in similar markets, facilitating a competitive and rational pricing structure. Furthermore, price negotiation mechanisms allow for fair and balanced pricing agreements. Notably, pharmacoeconomic calculations play a pivotal role, as

they offer a systematic evaluation of the cost-effectiveness of pharmaceuticals, informing pricing decisions that align with value-based healthcare.

In the UK, the Pharmaceutical Price Regulation Scheme (PPRS) controls prices billed to the NHS[14]. This regulatory framework emphasized the importance of ensuring that pharmaceuticals are priced reasonably, safeguarding the financial sustainability of the healthcare system. During the implementation of guidelines by the NICE, the process included negotiations that can contribute to price reductions. These negotiations underscored the commitment to optimizing healthcare resources by obtaining the most favourable pricing arrangements, furthering the goal of responsible pharmaceutical expenditure.

Thailand and the UK employed comprehensive mechanisms to determine government reference pharmaceutical prices. These measures aim to strike a balance between ensuring affordable access to essential medications and maintaining the financial viability of the healthcare system. Both contexts' criteria and negotiation processes reflect a commitment to evidence-based, fiscally responsible pharmaceutical pricing that ultimately benefits patients and the broader healthcare landscape.

High-Value List Comparison

A comparative examination of high-value drug lists is essential in understanding the differences between the NHS and the Comptroller General's Department in Thailand. In this context, the OCPA program encompassed 19 pharmaceutical items primarily directed toward oncological and haematological treatments. In contrast, the NHS high-value commissioning list, tailored to address oncological and haematological needs, features a significantly broader selection, comprising over 160 unique pharmaceutical items. The disparity in the number of items included in these high-value drug lists symbolizes the contrasting approaches the two healthcare systems take. The NHS, with its extensive list, afforded healthcare practitioners a more comprehensive array of pharmaceutical options to address specific medical conditions, thus accommodating a broader spectrum of patient needs.

In contrast, the OCPA program in Thailand adopted a more focused approach, prioritizing select pharmaceuticals explicitly tailored to the domain of oncology and haematology. This variance in list composition underscores the distinctive healthcare priorities and resource allocations in these two contexts. The NHS emphasizes offering a wide range of therapeutic options, which may indicate its commitment to addressing diverse patient

requirements. Conversely, the OCPA program's more concentrated selection likely reflects a strategic approach to managing resources and costs while ensuring access to critical medications within the defined therapeutic scope.

The comparison of high-value drug lists between the NHS and OCPA illuminated the divergent strategies employed by these healthcare systems. The contrast in list size underscores their respective priorities and resource allocation strategies, ultimately shaping the accessibility and range of high-value drugs available to healthcare practitioners and patients in their respective jurisdictions.

Patient Access

In Thailand, patient access to high-value drugs is contingent upon a multifaceted set of factors, chiefly predicated on their medical condition and the specific healthcare scheme to which they belong. Within this framework, individuals affiliated with the CSMBS enhance accessibility through the OCPA program. This program offers an extended list of high-value pharmaceuticals. However, it is important to underscore that a pre-authorization process remains imperative regardless of the healthcare scheme, as depicted in Figure 3. This pre-authorization procedure is a safeguarding mechanism to ensure the judicious utilization of high-value drugs.

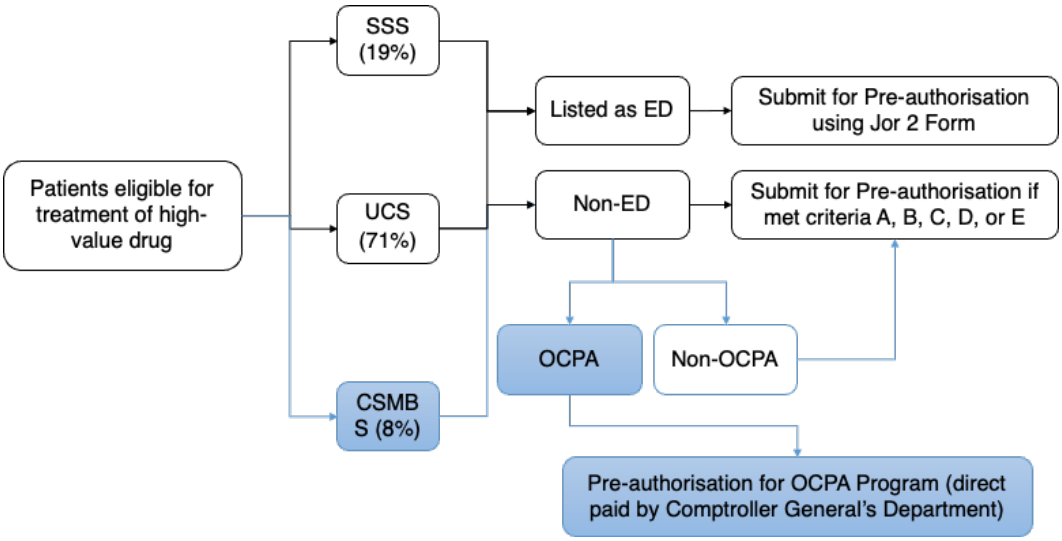

Figure 3. Patient access to high-value drugs in Thailand (17, 19, 20, 22, 23)

***A: Allergy or Adverse Drug Reaction to ED, B: Treatment failure from ED, C: Non-available in ED with evidence-based for efficacy and safety, D: Contraindication to ED, E: ED is expensive.**

Conversely, the UK boasts a singular, universal coverage system, eliminating the stratification of patient access based on healthcare schemes. In the UK, if a medication is categorized as a high-value commissioning drug, the pharmacy is entrusted with submitting a direct request to the NHS for reimbursement. This streamlined approach facilitates access to these vital pharmaceuticals within a unified healthcare system. However, it is noteworthy that when a drug is not listed as a high-value commissioning item and essential medicine list, patients in the UK may pursue reimbursement through the IFR mechanism[22]

The comparative analysis of patient access to high-value drugs in Thailand and the UK Underscores the role of healthcare schemes and administrative processes. While Thailand's approach accommodates different healthcare schemes, with the CSMBS group benefiting from the extended OCPA program, the UK's universal coverage system simplifies access for all. However, both systems uphold the importance of prior authorization or request mechanisms to ensure responsible and equitable access to high-value pharmaceuticals.

Suggestion

In Pharmaceutical reimbursement policies were pivotal in ensuring equitable access to essential medications within healthcare systems worldwide. This discussion explored the nuanced approaches employed by Thailand and the UK in drug reimbursement and high-value drug access, drawing upon the revised text provided earlier. Thailand's approach to drug reimbursement is characterized by a comprehensive framework that extends across all three health insurance schemes. The ED is the cornerstone of this framework, automatically entitling listed medications to reimbursement. Additionally, non-ED drugs can be considered for reimbursement, contingent upon sound medical justification provided by physicians. Such an inclusive approach reflects Thailand's commitment to ensuring that patients can access a wide range of medications, including those not listed in the ED. Hospitals play a pivotal role in the claim submission process, streamlining the reimbursement process.

The previous article[16] extensively examined Thailand's context compared to China and South Korea since 2012, covering general aspects. However, this review specifically delved into the high-value drugs list and the obstacles patients faced in accessing emergency department (ED) services. Another article[23] highlighted the necessity of pharmaceutical pricing regulation due to market imperfections. This review aimed to provide a comparative analysis that had not been previously explored.

Introducing the OCPA program with selective access for the CSMBS group further exemplifies Thailand's approach. This program caters to high-value drugs and aims to manage costs effectively, thereby contributing to the sustainability of the healthcare system. In contrast, the UK maintains a universal coverage system under the NHS. The UK employs the PPRS to regulate drug prices, ensuring reasonable pricing for the NHS. The high-cost drugs commissioning list serves as a mechanism for recognizing pharmaceuticals requiring direct reimbursement without specific insurance group restrictions. The UK also incorporated the IFR mechanism for non-listed drugs, enabling patients to seek reimbursement for medications outside established lists.

Patient access to high-value drugs presented another facet of comparison between Thailand and the UK. In Thailand, access is influenced by both medical conditions and healthcare scheme affiliation. Notably, the CSMBS group enjoys broader access to high-value drugs through the OCPA program. However, pre-authorization remains a mandatory step to ensure responsible use. Conversely, the UK's unified healthcare system provided equitable access, simplifying the reimbursement process for high-value commissioning drugs. The IFR mechanism served as a fallback option for non-listed drugs.

The expansion of the OCPA program showed promise in providing access to high-value drugs for the CSMBS group, prompting considerations for broader coverage. Efforts were made to streamline pre-authorization processes, ensuring responsible use while simplifying criteria and reducing administrative burdens for timely access to medications. Collaboration with pharmaceutical companies was enhanced to negotiate favorable pricing arrangements, aimed at reducing costs for patients and the healthcare system. These initiatives were undertaken with careful consideration of additional budgets to sustain and amplify their impact on healthcare accessibility and affordability.

Limitations of the comparison included the complexity of healthcare systems and the evolving nature of pharmaceutical policies in both countries. Variations in healthcare infrastructure, funding mechanisms, and political contexts may impact the applicability of findings beyond the specific case studies of Thailand and the UK. This review did not delve into potential negative impacts on the UK health system, including uncertainties and treatment delays in accessing high-cost cancer drugs through the UK Cancer Drug Fund. Moreover, it overlooked significant factors like income disparities, income tax rates, and budget allocations. These aspects merit exploration in future research.

Conclusion

The comparative analysis of drug reimbursement policies, a focus on the high-value drug list, in Thailand and the UK underscored the distinct approaches taken within these healthcare systems, each carrying significant implications for public health policy. Thailand's multi-scheme framework and inclusive drug criteria, exemplified by the OCPA program, aimed to ensure equitable access and cost-effectiveness. Conversely, the UK's NHS-driven universal health coverage system have the list of high-value drugs for all with more reimbursed items. This review had limited exploration focused solely on one factor. However, for public health policy, the need for multidisciplinary analyses and approaches was required. This constituted the key limitation, as it only explored patient access to high-value drugs via the high-value drug list, which was one policy aimed at facilitating, controlling, and enhancing rational drug use with the goal of cost-effectiveness.

These findings emphasized the importance of responsible drug reimbursement policies in shaping public health outcomes. Future research should delve into these diverse approaches' long-term health and cost-effectiveness implications. Evaluating the impact of patient access to high-value drugs on health disparities and resource allocation will be crucial. As pharmaceutical reimbursement evolves to address rising costs and specialized therapies, continued research is vital for informed, evidence-based public health policy that balances patient care with fiscal responsibility.

Author Contributions

PB and SK collaboratively designed and crafted the review's content. PB conducted the review and was responsible for data collection and its subsequent description. SK reanalyzed the data, while PB took the lead in manuscript writing. SK provided valuable input during the review and revision process. All authors carefully reviewed and approved the manuscript before its submission for publication.

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Conflicts of Interest

The authors declare that they have no financial, professional, or personal conflicts of interest that could potentially influence the objectivity or integrity of the research presented in this manuscript.

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