Review Article
http://mjiri.iums.ac.ir
Medical Journal of the Islamic Republic of Iran (MJIRI)

Med J Islam Repub Iran. 2024 (13 Mar);38.28. https://doi.org/10.47176/mjiri.38.28

The Role of Supplementary Insurance in Achieving Universal Health Coverage: A Comprehensive Review

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Received: 2 Sep 2023 Published: 13 Mar 2024

Abstract

Background: The gradual movement towards universal health coverage (UHC) is an important issue in many countries. The aim of this study is to identify the role of supplementary health insurance in achieving universal coverage.

Methods: This comprehensive review study was conducted to identify the role of supplementary health insurance in achieving universal health coverage. 4894 articles were found in the search in databases (Scopus, PubMed, and Web Science), and finally42 articles were selected. Considering the criteria of titles and abstracts, the reviewed articles were assessed, and a thematic analysis approach was used to analyze the collected data.

Results: The review showed 52 Sub dimensions in 7 dimensions. Policymakers can draw on international experiences to ensure that private health insurance contributes to achieving universal health coverage by Providing clarity within the national health financing policy framework regarding the role of private health insurance. Enhancing understanding of how supplementary health insurance impacts the performance of the healthcare system. They are improving oversight of private health insurance, regulating financial protection and consumer support, and implementing thorough market surveillance and proper allocation of health subsidies between the private and public sectors.

Conclusion: Supplementary insurance holds promise as a complementary tool in achieving universal health coverage. Addressing gaps in primary insurance and providing additional financial protection can contribute to enhanced access, improved quality of care, and reduced financial barriers to healthcare services. However, careful attention must be given to affordability, equity, regulation, and coordination with primary insurance schemes to ensure its effective implementation and prevent unintended consequences.

Keywords: Health insurance, Supplementary insurance, Universal health coverage

Conflicts of Interest: *None declared*
Funding: *None*

Cite this article as: Askarzade E, Abolghasem Gorji H, Arabloo J. The Role of Supplementary Insurance in Achieving Universal Health Coverage: A Comprehensive Review. *Med J Islam Repub Iran.* 2024 (13 Mar);38:28. https://doi.org/10.47176/mjiri.38.28

Introduction

Nowadays, health insurances are considered one of the paths to achieve universal health coverage (1). Universal coverage is defined as the access of all people to health services without facing financial barriers and difficulties (2).

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↑↑What is "already known" in this topic:
The gradual shift towards universal health coverage (UHC) is recognized as a significant global concern. The role of non-governmental actors, has been a subject of interest and debate in the context of improving the overall effectiveness of UHC policies. This study builds upon the existing knowledge by conducting a comprehensive review to specifically identify the role of supplementary health insurance in the achievement of universal health coverage.

→What this article adds:
supplementary health insurance addresses known gaps in primary insurance, providing additional financial protection and contributing to improved access, enhanced quality of care, and reduced financial barriers to healthcare services. However, the conclusion also emphasizes the need for careful consideration of factors such as affordability, equity, regulation, and coordination with primary insurance schemes to ensure the effective implementation of supplementary insurance and to prevent unintended consequences.

[DOI: 10.47176/mjiri.38.28]

The nature of insurance involves sharing the risk and replacing uncertainty with certainty, so insurance serves as a response to uncertain and risky conditions (3). A long-term calculation shows that the cost of healthcare and medical services for most employees during their tenure is less than what they pay as insurance premiums. This is the main criticism of the configuration of basic insurance in developing countries. Global experiences demonstrate that this structural weakness also leads to unethical practices and inequality in the healthcare system (4). In many contracted centers with basic insurance, the quality of services provided to the policyholders is lower than that received by individuals who directly pay for their own treatment expenses. Therefore, the phenomenon of irregular payments (bribery or under-the-table transactions) emerges in a dualistic healthcare system (5). Researchers believe that finding a way out of this imbalance is contingent upon three major changes in the insurance structure of countries. These changes include establishing a comprehensive basic insurance system, creating a comprehensive quality monitoring system for services, standardizing the tariffs of healthcare providers, and ultimately supporting the expansion of complementary insurance in a competitive free market (6). The healthcare systems in several countries incorporate aspects of managed competition. This allows citizens to select from a range of health insurance policies offered by different private insurers. (7). A Vafaei study has shown that insufficient coverage of basic health insurance services, weak management of overall health insurance, and the government's financial inability to fully cover treatment costs are among the main reasons for choosing supplementary health insurance (8).

Most countries in the world are facing rapid increases in healthcare costs, and the high out-of-pocket payments have led to a high demand for supplementary health insurance (9). In 2015, nearly 80% of households in the United States had purchased at least one supplementary health insurance plan (10), and more than 25% of Brazilians had supplementary health insurance in 2019 (11). Supplementary health insurances distribute the costs of illnesses among insured individuals through probabilistic loss distribution, reducing the financial burden on patients. It provides peace of mind for all policyholders and brings greater well-being to society (12). However, others believe that the use of supplementary health insurance contributes to the rapid increase in current medical expenses, leads to the fragmentation of the healthcare system, and exacerbates social inequality by widening the gap in healthcare utilization between different social and economic groups (13). One of the main problems with supplementary insurance is its government involvement, as it becomes part of the country's subsidies, ultimately resulting in the loss of resources due to induced demand. The presence of supplementary insurance increases patient visits, doubling the costs of the healthcare sector and also increasing unnecessary demands (14). The gradual movement towards universal health coverage (UHC) is an important issue in many developing countries. Often, there is limited financial capacity for implementing UHC, resulting in limited access to healthcare and high out-of-pocket payments. An important policy question is whether non-governmental actors providing health insurance can be used to improve the implementation of UHC (15).

Methods

This comprehensive review study was conducted to identify the role of supplementary health insurance in achieving universal health coverage. In his article derived from the book "Stage in Comprehensive Review," John Williams (16) outlines the seven stages of a comprehensive review: 1) Exploring the topic, 2) Information search, 3) Information storage and organization, 4) Selection and exclusion of information, 5) Search expansion, 6) Analysis and synthesis of information, and 7) Communication phase (17). In the first stage, all relevant studies retrieved through keyword searches in Persian and English databases were examined without time restrictions.

keywords and databases were first specified. The keywords "Service coverage," "Cost coverage," "Quality of service," "Population coverage," "Justice and access to services," "universal health coverage," "private health insurance," "voluntary health insurance," "supplementary health insurance," "complementary health insurance" were searched in the title and abstract sections without any time or location limitations. The exclusion criteria were studies conducted outside the health system, non-English and Farsi language studies, and studies without full-text access. In the next stage, data collection forms were designed to extract information based on the research objectives, including study information, author information, study objectives, research methods, and findings. In the third stage, the identified articles from each database were entered into the EndNote software, and duplicate cases were removed using the software. The search in each database was performed using the defined search method for that specific database. The screening process and search results are presented in the PRISMA flowchart (Figure 1). In the fourth stage, considering the criteria of titles and abstracts, the reviewed articles were assessed, and all potentially eligible studies were selected. The fifth stage involved expanding the search by examining the references of the selected articles. from 4894 articles found, finally, 42 articles were selected, that the sixth stage, based on the framework of the universal health coverage model, the thematic analysis approach was used to analyse the collected data.

Results

Private insurance plays different roles in various countries, with an emphasis on quality and timely access to services in most nations. The share of private insurance in different countries varies from less than one percent (Bulgaria, Hungary, Italy) to more than 10 percent (Ireland, France, Estonia). Several countries, including Croatia (2001), the Netherlands (2006), Belgium (2008), and Georgia (2013), have taken measures to strengthen and expand public financial coverage and eliminate the alternative role of private insurance. Germany (2000 and 2009) has limited the scope of private insurance activities. In Croatia and Germany, opting out of public financial coverage has been prohibited, and the handling of financial pressures resulting from risk

[DOI: 10.47176/mjiri.38.28]

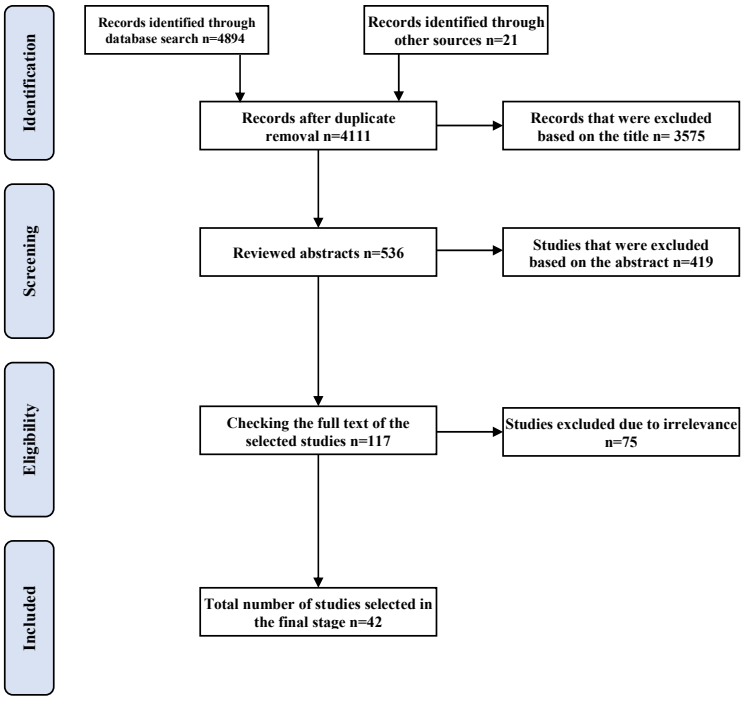

Figure 1. PRISMA Flow Diagram: Database search and article and report selection process

pooling has been restricted (18).

Private health insurance in China is relatively new and covered 3.8 percent of national health expenditures in 2010 (19).

Table 1. The dimensions of private insurance in countries (15, 18, 20-59)

Dimensions	Sub dimensions	Country
General Policies	Establishment of a National Agency for Supplementary Health	Brazil
	Promotion of private insurance	Bulgaria, Greece ,Hungary, Lithuania, Poland, Romania, Georgia , Armenia, China, Iran
Coverage	Coverage of treatments not covered by basic insurance	Germany, Australia ,France, Switzerland, Japan, Greece, Italy, Iran
	Reduction of waiting time for receiving services	Germany, America ,Australia, France, England, South Korea, Hungary, Italy
	Freedom to choose between private or public insurance based on a certain income threshold	Germany
	Provision of supplementary health insurance by employers to employees	France
	Employment opportunities for individuals or volunteer groups in private supplementary insurance	France
	Supplementary insurance with specified prices and known quality	France, Germany, England, Iran
	Coverage of pre-existing conditions	Brazil, Germany ,Ireland, Belgium, Germany
	Minimum or standard benefits	Brazil, France ,Germany, Ireland, South Africa, Italy
	Cost ceiling for user expenses in private health insurance	Germany, South Africa
	Lifetime coverage for complementary Medicare programs and private insurances based on each policy's conditions.	America
	Incentives for efficiency and quality in organization and service delivery	Brazil
	Insurance premium cap	Germany
	Mental health services, care for the elderly, childbirth, and services outside the national health list	England, Netherlands, Hungary
	Non-participatory supplementary government insurance coverage for citizens who lack the necessary resources to meet their needs	France
	Expanded Healthcare Coverage in Supplementary Insurance	Australia
	Different types of private supplementary insurance based on purchased packages	France, Germany, Iran
	supplementary Medicare services based on standardized models of comprehensive health insurance, disability insurance, and retirement insurance	America
	Choice of private rooms	France, Germany, England, Switzerland, Japan, South Korea, Iran

[DOI: 10.47176/mjiri.38.28]

Table 2. Continued

Dimensions	Sub dimensions	Country
Access	Open enrollment	France, Australia ,Germany, Ireland, South Africa, Iran
	Mandatory coverage	Germany, France
	Lifetime coverage	France, Brazil, Germany ,Ireland, Iran
	Ensuring market-based policy offerings	Australia, Brazil
	Prohibition of penalties for switching	Holland and Switzerland
	Ranking of plans to facilitate choice	Australia
	Faster access to acute care and physicians	Holland, England ,Australia, Germany
Payment	Insurance ranked based on society	Australia, Brazil ,Ireland, South Africa, Italy, Slovenia, Belgium, Estonia, Croatia
	Risk equalization to support societal ranking	Ireland
	Premium payment based on age, gender, selected services, smoking habits, etc.	France, Germany, Iran
	Exempted or government-covered insurances	France, Germany, France ,Croatia
	Insurance discounts	Italy
	Grouping and organization based on eligible services	America, Iran
	Risk equalization to support societal ranking	Chile and Ireland
	Reserve for elderly care	Germany
	Prepayment for services	Brazil, Germany, Iran
	Subsidized insurance premiums, discounted, overlooked, or fully covered by the government	Australia, France ,Germany, Ireland, South Africa
	Limitations on insurer profits	Australia, Chile
Rules and regulations	Regulations to encourage coverage gaps in public financial security	Australia
	Mandatory supplementary insurance provided by statutory health insurance funds	Belgium, Germany, France
	Establishment of roles, responsibilities, and enforcement methods based on regulations	France, Germany ,Australia, Brazil, Iran
	Funding Structure of Supplemental Insurance	America
	Supervision and evaluation by an independent organization	America, Brazil
	Development of performance indicators for supplementary insurance	Brazil, Iran
	Physicians practicing either in the private sector or with private contracts	Canada, Iran
Financing	Strengthening and expanding public financial security coverage	Croatia, Holland ,Belgium, Georgia, Japan
	In government supplemental insurance: covering all related costs from national resources	France
	Providing subsidies for coverage of low-income individuals voluntarily enrolled in private supplementary insurance	France
	Payment of insurance premiums proportional to income, jointly paid by the insured and the employer if employed	England, Japan
	Limiting the increase in discounts	Australia
	Reducing the financial risk of insured individuals	China
Obligations and commitments	Franchise payment based on the type of purchased insurance policy	France, England ,Germany, Australia, Iran
	Guaranteeing direct payment of a fixed deductible and the difference between actual price and government tariff for services (as benefit payments)	France

The findings of Table 1 have shown that the demand for private insurance is significantly increasing as more Chinese individuals join the middle class and seek better healthcare services (48). To bridge the coverage gap, some individuals purchase private health insurance (PHI) in addition to their public health insurance (49, 50). In a case study of South Korea, the results indicate the need for policy options to reduce the ethical hazard of private insurance in the primary care sector. Governments should consider various policy options to mitigate the ethical hazard of private insurance in the primary care sector and its negative impact on the financial affairs of national insurance. In a healthcare system where private insurance plays a complementary role as a financial mechanism, such as in Korea, a clear definition of the coverage boundaries between public and private health insurance will be essential. More proactive policies, such as taxing private health insurance premiums equivalent to the negative cost-effectiveness it creates for public insurance, can be considered (60).

Population Coverage: An ethically -based and undesirable selection risk model indicates that basic insurance should cover treatments that suffer the most harm from undesirable selection. This recognizes a well-established intuition that the government can improve the outcome of the insurance market by addressing the issues of undesirable selection. The Jan Boone study model demonstrated that the cost-effectiveness of treatments plays no role in the prioritization of treatments for coverage in basic insurance. Basic insurance should cover treatments in which inefficiencies exist in the supplementary market (22)

In Belgium, France, Germany, Ireland, and Italy, efforts have been made to increase access and affordability of private insurance. Some of these countries have also increased

[DOI: 10.47176/mjiri.38.28]

regulations to improve the financial protection provided by private insurance. Belgium made supplementary insurance provided by statutory sickness funds mandatory, and since 2016, France has made private insurance coverage mandatory for all employers. In France and Germany, the purchase of private supplementary health insurance for employees or for individuals opting out of the social health insurance scheme (in Germany) is mandatory to ensure access and prevent risk selection. Financial protection can be increased by making coverage of pre-existing chronic conditions mandatory (Ireland) or by prohibiting benefit restrictions and guaranteeing minimum benefit packages (France) (46).

Service Coverage and Financing: The goal of universal coverage can be observed in two dimensions: horizontal extension and vertical depth. Private systems play a crucial role in extending coverage beyond public systems and subsidies. Using South Africa as an example, it emphasizes how weak regulations in private systems can undermine this role, reducing achievements to levels of attainable social support. The South African system's sensitivity to regulatory design highlights the importance of responsive policies. Policymakers have an opportunity to achieve social support goals through strategic market management, offering an alternative to less responsive tax-based systems (46). Many developing countries define their benefit packages as comprehensive and free. However, in reality, access is limited by implicit (e.g., long waiting lists) or explicit (e.g., eligibility criteria) barriers. This often pushes people towards duplicative insurance coverage or voluntary purchase of private health insurance. Examples can be found in Africa and South America. In countries like Brazil, Chile, and South Africa, over 20% of their healthcare services were financed through non-governmental health insurance schemes in 2005 (51, 61). In 2000, Germany considered the choice of private coverage irreversible for individuals above 55 years of age. In France, complementary private health insurance is provided for free to cover expenses for low-income families, and subsidies are provided for low-income families who are not eligible for it. Australia introduced lifelong community rating in private health insurance. In 2016, employers in France became obligated to provide supplementary health insurance to their employees (53).An overview of the development of private health insurance markets indicates a minimal change in their role. The only notable change has been the replacement of private health insurance with a mandatory system in the Netherlands in 2006. So far, the most prominent and extensive phenomenon has been the intensified government intervention over time (53). Further intervention has also followed the expansion or growth of the market, which exacerbates the problems of private health insurance and makes them less acceptable. In such cases, the intervention has been guided by three objectives: increasing consumer protection, occasionally in response to mistakes (Germany), but usually to reduce financial and transaction costs for consumers facing multiple and confusing coverage options and protecting public financial coverage against financial pressures intensified by private and supplementary health insurance (51). In the Middle East and North Africa region, the main drivers are: 1) growing and more diverse consumer demand, 2) increasing wealth, especially in higher socio-economic groups, and 3) inability to financially sustain the increasing costs of healthcare solely from public sources (51). Egypt has been introducing UHC for the entire population since 2018. Financial constraints (such as economic recession) limit the scope and quality of public services. Recent regulations explicitly allow individuals to contract with private insurance. Companies pay for co-payments or upgrading insurance classes in hospitals or other complementary services (15). In Iran, the substantial disparity in tariffs between the public and private sectors, stemming from either the low government tariffs or the disproportionately high private tariffs, results in supplementary insurance companies covering this tariff gap (36) and greater likelihood of demand for supplementary medical insurance in households with better economic status, higher educated heads, female heads, and smaller households with greater expected medical expenses, and household income is the most important factor affecting demand for supplementary medical insurance(62).

In reality, UHC, especially in developing countries, cannot fully cover the scope of healthcare services. Even with fully operational public coverage, the out-of-pocket payment remains significant (54). In Australia and Ireland, tax subsidies for private health insurance have also been substantial in relation to public health expenditures, and analysis has shown that these subsidies are not only unfair but also prioritize patients covered by private health insurance. The results indicate that tax subsidies, especially in supplementary private health insurance markets, are inappropriate. As long as tax subsidies encourage the growth of such markets, they also guarantee the exacerbation of negative effects (55, 56, 63). The effects of supplementary private health insurance on the four subsequent healthcare processes and outcomes (diagnosis, treatment, utilization, survival) depend on the scope of Social health insurance coverage, as well as on the method of reimbursement of supplementary private health insurance. Hence, it is necessary to consider the relationship between Social health insurance and supplementary private health insurance when health policymakers account for the role of supplementary private health insurance in financing medical services within a national health care system. (The Benefits of Supplementary Private Health Insurance for Healthcare Utilization and Survival among Stomach Cancer Patients). A study in China provided evidence that supplementary PHI increased the probability of physical examination but decreased that of hospitalization.

While data for approximately one-fifth of all countries with low and middle incomes is unavailable for the period between 1995 and 2012, on average, a slight upward trend in private insurance can be observed. The percentage of private insurance has increased, but the regional averages of private insurance have shown relatively modest growth throughout this period, less than one percent. However, many countries in the Americas and Africa regions demonstrate a higher increase. Various reasons contribute to the trend in private insurance expenditures, which can be summarized under these general themes: 1) external influences,

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2) government policies regarding the role of private insurance and its regulations, and 3) the willingness and affordability of different population segments to pay for enrolment in private insurance plans. These issues are interrelated and can either increase or decrease private insurance expenditures depending on the country's circumstances (47).

Concerns and policy challenges: unequal access to health services, the level of public subsidies for private insurance, the challenge of ensuring affordable access to private insurance for certain population groups, high administrative costs associated with private insurance, and transaction costs associated with complexities that private insurance introduces to health systems, particularly in larger markets for private insurance. In Austria, Finland, France, Germany, Italy, and Poland, concerns exist regarding unequal access to healthcare, where individuals with private insurance have easier, faster, or preferred access to treatment. In the United Kingdom, concerns stem from multiple factors. For example, in settings where providers are paid from both public and private sources (physicians working in both sectors or private beds in public hospitals), the costs paid by private insurance may be higher than those paid publicly. Physicians and hospitals may have incentives to prioritize patients covered by private insurance, which can lead to longer waiting times for those relying on public financial coverage and being treated by less experienced medical staff. Furthermore, when physicians allocate their time to private practice, the public sector loses out, and physicians working in both sectors may face role conflicts.

Different access for individuals with private insurance goes against the principle of access based on need rather than the ability to pay. In the United Kingdom, these concerns are addressed by arguing that private insurance users contribute more towards their private insurance coverage than their tax-funded contributions to the National Health Service (NHS), and furthermore, utilizing privately insured care reduces the burden on the NHS, benefiting those who rely on the NHS for treatment (64). Even if this claim is valid, the benefits of private insurance may not outweigh the costs in terms of physician time and public subsidies. In Ireland, some have argued that public subsidies for private insurance are justified because those who choose private insurance effectively disregard a legal entitlement while still financially supporting public healthcare services through taxation. Additionally, private insurance reduces the demand for publicly funded healthcare services. However, evidence does not confirm this claim; a significant portion of care provided by private insurance is performed in public hospitals at lower economic costs (63). The systematic uptake of private insurance is concentrated among individuals with higher socioeconomic status, partly because private insurance is less accessible to the most vulnerable population groups (such as elderly or disabled individuals, those with chronic conditions, unemployed individuals, and poorer families). These issues raise questions about policies that reduce the scope, coverage, or depth of public financial provision and expect private insurance to fill the gap. Even in countries with well-established private insurance markets that cover a significant portion of the population, such as France, evidence shows inequality in the depth of private insurance coverage and, consequently, inequality in healthcare utilization. Relatively high administrative costs associated with private insurance have been a concern in several countries, especially in those that have promoted private insurers to provide financial benefits of public provision. In such cases, private insurers do not provide adequate value for money. Private insurance can introduce significant complexities to a healthcare system and increase transaction costs for governments and households. Supervising and regulating private insurance markets, ensuring access and affordability of private insurance for those in need, developing policies to create clear boundaries between public and private financing and delivery of services, and addressing domestic and European Union legal challenges are all time-consuming and costly endeavors.

Conclusion

A crucial policy question is whether healthcare insurance provided by non-state actors (whether non-profit or for-profit) can address some of the implementation challenges of Universal Health Coverage (UHC)? Supplementary health insurance plays a supportive role in achieving universal health coverage (UHC) by filling gaps in coverage and providing additional benefits beyond the basic health insurance schemes (65). While private health insurance's role in extending UHC may be limited in some contexts, like China (27), it can recalibrate its approach and play a significant role in spreading UHC in other countries (66). Additionally, supplementary private health insurance coverage can increase the utilization of specific healthcare services, such as dental care, while potentially decreasing visits to general practitioners (67). Policymakers and analysts worldwide consider supplementary health insurance as an alternative to collective financing that enhances efficiency and increases consumer choice (68). Lessons from countries like France demonstrate that universal coverage can be achieved without excluding private insurers from the supplementary insurance market (69). In the pursuit of UHC, private health insurance agencies have collaborated to coordinate benefits and contribute to achieving universal coverage (70). While supplementary health insurance has its benefits, it is important to regulate and manage it properly to avoid potential negative impacts on efficiency (71). Private health insurance can have a supplementary role in UHC, as seen in South Africa and China (72). Overall, the role of supplementary health insurance in UHC can vary depending on the context and specific policies in place.

However, many governments use cost-effectiveness as a criterion for inclusion in basic healthcare coverage (73). When deciding on changes to the basic insurance package, two empirical issues need to be addressed. Firstly, which types yield the highest health returns? Secondly, which diseases (and their treatments) are prevalent among these types? For the first issue, a dataset used to estimate a risk-adjustment model for a country is useful. For the second issue, epidemiological studies are needed to identify the prevalence of diseases (74-77).

[DOI: 10.47176/mjiri.38.28]

Private health insurance can have disproportionate effects and lead to risk segmentation, inequality, and inefficiency, so it should be carefully considered and monitored. Countries vary widely in the role of private health insurance in their healthcare systems and the size and performance of their markets.

One of the frequently raised questions is whether private insurers should have a role in providing public financial coverage in addition to private health insurance, which has been observed in discussions about policy movements towards universal health coverage in countries such as Egypt, Germany, India, Ireland, the Netherlands, South Africa, and the United States (78, 79). The Chinese government engages private insurers to provide supplementary coverage for costly healthcare services (80, 81).

Financial resources for achieving universal health coverage are often limited. In developing countries, many households are unable to contribute to the public budget through health insurance premiums (82). The World Health Report suggests that developing countries should allocate a fixed increase for health in their domestic budgets (as a percentage of gross domestic product) and states that costs below 5-4% of gross domestic product delay the implementation of UHC (83). According to international standards, low-income countries should spend an average of $86 USD per person per year to ensure access to essential health services, while 72% of low- and middle-income countries reached this level in 2012. Only two countries with low or higher incomes met the required level of expenditure (54).

Despite such diversity, patterns can be identified across countries, providing lessons for policymakers contemplating the establishment, expansion, or addressing of issues in the private health insurance market. Policymakers can draw on international experiences to ensure that private health insurance contributes to achieving universal health coverage by:

- Designing comprehensive benefits packages: Germany has a well-established system of statutory health insurance supplemented by private voluntary health insurance.
- Ensuring affordability and accessibility: The Netherlands has implemented a system of regulated competition and risk equalization to make supplementary insurance affordable for all citizens.
- Addressing gaps in coverage: Canada's publicly funded healthcare system covers essential medical services, but there are gaps in coverage for prescription drugs, dental care, and vision care. To address these gaps, some Canadians opt for supplementary insurance plans that provide coverage for these services.
- Implementing risk pooling mechanisms: Switzerland has a mandatory basic health insurance system complemented by various supplementary insurance options.
- Strengthening regulation and consumer protection: France has implemented strict regulations on supplementary health insurance to protect consumers. Insurers must adhere to standardized benefit packages and cannot deny coverage based on pre-existing conditions. The Agência Nacional de Saúde Suplementar (ANS) in Brazil regulates private health insurance companies and sets guidelines for coverage.
- Promoting awareness and education: Japan has a system of national health insurance supplemented by voluntary private insurance. The government actively promotes consumer awareness through educational campaigns to inform citizens about the benefits and options available through supplementary insurance.
- Collaboration between public and private sectors: Australia has a mixed healthcare system where the government provides public health insurance (Medicare) while encouraging the purchase of supplementary private health insurance.
- Providing clarity within the national health financing policy framework regarding the role of private health insurance in the healthcare system.
- Enhancing understanding of how private health insurance impacts the performance of the healthcare system: Anticipating foreseeable risks and potential issues should lead to realistic expectations of what private health insurance can achieve at the system level.
- Introducing regulations to ensure transparency in supplementary insurance policies, including clear terms, conditions, pricing, and grievance redressal mechanisms.
- Exploring policy options to reduce the moral hazard effects of private health insurance.
- Subsidies and Affordability Measures: Implementing subsidies or tax incentives to make supplementary insurance more affordable for low-income individuals and vulnerable populations. the Australian government offers income-based subsidies through the Private Health Insurance Rebate scheme to make private health insurance more affordable.

Common challenges of private health insurance include

- Inability to fill gaps in public financial coverage and reduce out-of-pocket payments.
- Affordability and Equity: Ensuring affordability and preventing the creation of inequities among different population groups.
- Risk Segmentation: The potential for supplementary insurance to attract healthier individuals, leading to adverse selection and leaving primary insurance schemes with higher-risk populations.
- Regulatory Frameworks: Developing robust regulations to safeguard consumer interests, prevent fraudulent practices, and ensure the sustainability of supplementary insurance schemes.
- Public vs. Private Balance: Striking a balance between public and private involvement in the provision of supplementary insurance.
- Inequality in access to healthcare services between individuals with private health insurance, individuals without private health insurance, and even individuals with private health insurance. Since private health insurance is voluntarily purchased more systematically by individuals in higher socio-economic groups, the larger the market, the more observable and less acceptable this inequality becomes.
- Lack of incentive for private health insurance to promote efficiency and quality in organizations and healthcare

[DOI: 10.47176/mjiri.38.28]

delivery in most countries, coupled with dispersed purchasing power, means that very few private insurers engage in strategic purchasing. In some cases, this leads to price increases in the broader healthcare system.

- Tendency to increase financial pressure, especially in cases where the boundaries between public and private coverage are not clearly defined, incentives in the healthcare system are not aligned, and tax subsidies for private health insurance are indifferent. As a result, financial and human resources are diverted from public financing coverage to the benefit of individuals with private health insurance.
- Failure to implement timely reforms and the existence of conflicting interests in enacting reforms that clear evidence suggests exacerbate or perpetuate inequality and inefficiency (e.g., reckless tax subsidies or incentives that encourage providers to prioritize individuals with private health insurance).
- Lastly, it is crucial to recognize the extent to which the interests generated by private health insurance hinder the expansion of public financial coverage. Considering whether private insurers should have a role in providing universal financial coverage has not only complicated policy debates in many countries but also hindered national progress toward this goal.

Acknowledgments

This study is based on the Ph.D. thesis prepared by the first author under the supervision of the second author.

Authors' contributions

JA, HG conceived the study and participated in its design. EA developed and conducted the literature search strategy and conducted the data extraction. EA and HG carried out the statistical analyses. EA drafted the manuscript. All authors read and approved the final manuscript.

Ethics Approval and Consent to Participate

Ethical Approval Was Granted by Iran University of Medical Sciences.

Conflict of Interests

The authors declare that they have no competing interests.

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