

Research on the Moral Risks and Countermeasures of Basic Medical Insurance Coordination

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Abstract: *With the gradual improvement of the basic medical insurance system, provincial pooling has become an important way to enhance the mutual assistance ability, management efficiency, and promote fairness of funds. However, this process also faces moral hazard issues caused by changes in the interests of local governments, medical insurance departments, medical institutions, and insured persons. This study systematically reviewed the manifestations, causes, and influencing factors of moral hazard through literature review and case analysis, and proposed measures to strengthen supervision and improve incentive mechanisms. The study also found that Chongqing has achieved significant results in controlling moral hazard, and its experience has important reference significance for other regions. Finally, specific policy recommendations were put forward, including steadily promoting provincial-level coordination, strengthening top-level design, paying attention to local finance, strengthening publicity and education, and establishing dynamic adjustment mechanisms, to ensure the safe and efficient operation of the medical insurance fund and the smooth implementation of provincial-level coordination reform.*

Keywords: *Basic medical insurance, Provincial pooling, Moral hazard, Regulatory mechanism, Incentive mechanism*

1. Introduction

Research on the moral hazard issues and countermeasures of provincial-level pooling of basic medical insurance in China has made certain progress. The research mainly focuses on the moral hazard issues and their impacts that arise during the implementation of the provincial overall planning system. Fu Mingwei and Xu Wenhui (2019)^[1] conducted a study on the influencing factors and empirical models of provincial-level pooling of basic medical insurance in China, and pointed out that moral hazard is one of the important factors restricting the promotion of provincial-level pooling. They found that moral hazard mainly stems from the decreased regulatory enthusiasm of local governments after provincial coordination, as well as excessive consumption behavior of medical institutions and patients^[2]. In addition, Li Yaqing (2020) further explored the intergovernmental fund risk sharing mechanism after the provincial pooling of basic medical insurance, emphasizing the threat of moral hazard to the security of medical insurance funds, and proposed a preliminary plan for establishing a risk sharing mechanism^[3].

In terms of research strategies, domestic scholars generally believe that strengthening regulation and establishing effective incentive mechanisms are key. Zhu Fengmei (2021) proposed from the perspective of international experience that provincial-level coordination should be promoted step by step in different regions, and the funding relationship, responsibility sharing, and fund supervision relationship between provincial-level and current coordination areas should be handled well^[4]. Zeng Wangfeng (2024), based on research on policy practices in various regions of China, summarized the main experiences and challenges faced in promoting provincial-level coordinated medical insurance policies, and proposed countermeasures and suggestions, including establishing a medical insurance fund management system, narrowing policy differences, streamlining the handling system, unifying information systems, and promoting collaboration among the "three doctors"^[5].

The research on moral hazard in medical insurance started earlier in foreign countries and has accumulated rich experience. Arrow (1963), as one of the earliest scholars to study ethical issues in healthcare insurance, proposed the theories of information asymmetry and adverse selection, providing a theoretical basis for understanding ethical risk issues in the healthcare insurance market^[6]. In terms of countermeasures, foreign research emphasizes controlling moral hazard through institutional design and

market mechanisms. For example, innovative practices such as introducing market competition mechanisms, implementing managed care, and promoting electronic health records are considered effective ways to reduce moral hazard. In addition, foreign research also focuses on balancing the differences between different risk pools through risk adjustment mechanisms to improve the fairness and efficiency of the medical insurance system. These experiences provide useful references for the moral hazard issues in the provincial-level pooling process of China's basic medical insurance.

In summary, both domestic and foreign studies have pointed out the existence of moral hazard in medical insurance and its impact on the operation of the medical insurance system, and proposed corresponding countermeasures. Domestic research focuses more on proposing specific institutional improvements and policy recommendations based on the actual situation in China; And foreign research provides a richer theoretical foundation and practical experience, providing useful references for the improvement of China's medical insurance system.

This study mainly focuses on the theme of "Moral hazard issues and countermeasures in the provincial-level pooling of China's basic medical insurance", using literature review as the main research method, aiming to systematically sort out and analyze the moral hazard issues and their causes in the current provincial-level pooling process of China's basic medical insurance, and propose corresponding countermeasures and suggestions based on this.

To ensure the comprehensiveness and authority of the literature, this study mainly relies on Chinese databases such as China National Knowledge Infrastructure (CNKI), Wanfang Data, and VIP Information for literature retrieval. When setting keywords, we selected "basic medical insurance", "provincial pooling", "moral hazard", "risk adjustment mechanism" and "incentive constraint mechanism", etc., and combined these keywords through Boolean logical operators for precise retrieval. At the same time, considering the evolution of the provincial pooling policy for basic medical insurance, we have set the time range for literature search from 2000 to the present to ensure the timeliness and relevance of the selected literature.

Through a systematic literature review, this study comprehensively sorted out the moral hazard issues in the provincial-level pooling process of China's basic medical insurance, and based on the results of literature analysis, proposed targeted countermeasures and suggestions. These policy recommendations aim to provide theoretical references for policy-making and practical operations, in order to promote the smooth implementation and sustainable development of provincial-level pooling of China's basic medical insurance.

2. Moral hazard issues in provincial pooling of basic medical insurance

2.1. Theoretical analysis

In the operational mechanism of provincial-level pooling of basic medical insurance in China, a significant feature is the formation of multi-level principal-agent relationships between provincial governments and multiple entities. The construction of this relationship aims to achieve effective management and operation of the medical insurance fund through clear division of responsibilities and allocation of rights and responsibilities.

Firstly, there is a principal-agent relationship between provincial and local governments. Provincial governments, as higher-level institutions, undertake macro responsibilities for the collection and expenditure supervision of medical insurance funds, and delegate these specific tasks to local governments for implementation. Local governments act as agents responsible for the specific implementation of fund collection, expenditure supervision, and other related work.

Secondly, there is also a principal-agent relationship between provincial governments and medical insurance departments. The medical insurance department has been entrusted by the provincial government with the responsibility of managing and formulating policies for the medical insurance fund. The medical insurance department needs to ensure the compliant use of funds, maintain the safety and stability of funds, and formulate corresponding policy measures to guide and regulate the operation of the medical insurance system.

In addition, a principal-agent relationship has also been formed between provincial governments, medical institutions, and insured persons. As providers of medical services, the behavior of medical institutions directly affects the expenditure of medical expenses and the efficiency of the use of medical insurance funds. And the insured are the ultimate beneficiaries of the medical insurance system, and their

actions also have an impact on the sustainability of the fund. Provincial governments expect medical institutions to provide reasonable and necessary medical services, and expect insured persons to use medical insurance funds reasonably.

However, this complex multi-level principal-agent relationship also provides a breeding ground for moral hazard behavior. Due to information asymmetry and conflicts of interest, various agents may take actions that harm the interests of the principal in order to maximize their own interests. For example, local governments may conceal income or reduce tax collection efforts to alleviate local financial pressure; The medical insurance department may encounter problems such as inadequate supervision or abuse of power; Medical institutions may take advantage of information advantages to engage in excessive medical treatment or induce demand; Insured individuals may engage in behaviors such as excessive consumption or fraudulent insurance practices. These moral hazard behaviors seriously threaten the safety and sustainability of the medical insurance fund^[7].

2.2. Case Analysis

Since 2012, Chongqing has accumulated rich experience in controlling moral hazard by implementing provincial-level pooling of basic medical insurance for urban employees. Chongqing has effectively coordinated the interests of all parties through a series of institutional innovations and policy measures to ensure the safe and efficient operation of the fund. At the same time, providing certain financial rewards to districts and counties that have exceeded their collection targets has further mobilized the enthusiasm of local governments. Chongqing strengthens the supervision of medical institutions by establishing a sound management system for designated medical institutions and a cost audit mechanism to strictly control the unreasonable growth of medical expenses^[8]. In addition, real-time monitoring and early warning of medical behavior are effectively prevented through the use of technologies such as big data, which can prevent excessive medical treatment and fraudulent insurance practices.

Chongqing has vigorously promoted the informatization construction of medical insurance, realizing the full process informatization management of fund collection, payment, settlement and other links. The use of information technology has improved the transparency and traceability of fund utilization, providing strong support for regulation.

The experience of Chongqing shows that measures such as institutional innovation, improved regulatory mechanisms, and information technology construction can effectively control moral hazard issues under provincial coordination and ensure the safe and efficient operation of funds. These experiences have important reference significance for other regions to promote provincial pooling of basic medical insurance.

3. Measures to address moral hazard issues in provincial-level pooling of basic medical insurance in China

3.1. Strengthen regulatory efforts

To establish a sound regulatory mechanism for provincial-level pooling of China's basic medical insurance, it is necessary to strengthen regulatory efforts from multiple dimensions. The primary task is to clarify regulatory responsibilities, that is, to clearly define the regulatory responsibilities and authorities of provincial medical insurance departments, local medical insurance management agencies, medical institutions, and insured persons, ensuring comprehensive coverage and effective implementation of regulatory work. On this basis, we will improve the regulatory system, formulate detailed regulatory regulations and operational procedures, promote standardization and normalization of regulatory work, reduce human intervention, and enhance the transparency and fairness of regulation.

At the same time, strengthen cross departmental collaboration, establish a cross departmental regulatory coordination mechanism, promote information sharing and collaborative cooperation between the medical insurance department and relevant departments such as health, finance, and auditing, and form a strong regulatory force. In addition, improving regulatory efficiency is crucial, and advanced information technologies such as big data, cloud computing, and artificial intelligence need to be introduced to build a medical insurance regulatory information system, achieve real-time collection, analysis, and early warning of regulatory data, and enhance the accuracy and timeliness of regulation^[9].

Finally, increase the punishment for violations, improve the punishment mechanism, clarify the

criteria for identifying violations and punishment measures, and ensure the fairness and deterrence of punishment. Serious legal and regulatory measures will be taken against any violations discovered, and typical cases will be publicly exposed to create an effective deterrent effect.

3.2. Improve incentive mechanisms

To further enhance the management efficiency of provincial-level pooling of China's basic medical insurance, it is necessary to establish a scientific assessment and evaluation system and improve corresponding incentive measures. The assessment system should be comprehensive and targeted, incorporating key indicators such as management efficiency, utilization efficiency, and service quality of the medical insurance fund. Differentiated assessment indicators should be set according to the actual situation in different regions to ensure fairness and rationality of the assessment. To enhance the credibility and credibility of the assessment results, a third-party evaluation agency can be introduced to objectively evaluate the management and use of the medical insurance fund.

In terms of incentive measures, regions and individuals with excellent performance in assessments should be commended and rewarded, such as funding subsidies, policy preferences, honorary titles, etc., to stimulate their work enthusiasm and creativity.

In addition, long-term incentive mechanisms should be established, such as setting up innovation awards for medical insurance fund management and excellent service quality awards, to encourage regions to continuously explore and practice new management models and methods, and promote the sustained and healthy development of China's basic medical insurance at the provincial level.

3.3. Related policy recommendations

In summary, measures such as strengthening supervision, deepening collaboration among the "three medical institutions", improving the handling system, establishing a unified information system, and providing specific policy recommendations, timelines, and arrangements for responsible persons can effectively address moral hazard issues and promote the smooth implementation of the provincial-level coordinated reform of China's basic medical insurance. Future research should further expand its depth and breadth, providing more comprehensive and in-depth intellectual support for medical insurance reform.

4. Conclusions

This study provides an in-depth analysis of the moral hazard issues faced by the provincial-level coordinated reform of China's basic medical insurance, revealing potential behavioral deviations among insured individuals, local governments and agencies, and designated medical institutions during the reform. Research has found that although provincial-level pooling aims to address the fragmentation of medical insurance, improve the mutual assistance ability of funds, and promote institutional fairness, it may also lead to moral hazards such as excessive medical treatment, waste of medical resources, decreased regulatory enthusiasm of local governments, and reverse redistribution of funds.

The innovation lies in the fact that this study not only focuses on the surface manifestations of moral hazard issues, but also delves into the underlying causes and mechanisms, and proposes targeted response measures. A comprehensive and in-depth solution has been provided to address the issue of moral hazard through multidimensional strategies such as strengthening supervision, deepening collaboration among the three medical institutions, improving the handling system, and establishing a unified information system.

Future research directions can be further expanded to explore the impact of policy endogeneity on healthcare reform, reveal the key role of intermediary mechanisms in the formation of moral hazard, and construct more accurate prediction and intervention models based on individual behavior decision theory.

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