

Influence research and strategy discussion on the reform of employee medical insurance outpatient mutual support mechanism: A case study of Guizhou Province

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Abstract: In April 2021, The State Council of China issued the Guiding Opinions of The General Office of the State Council on Establishing and Improving the Mutual Support Mechanism for Employees' Basic Medical Insurance outpatient Service, in order to promote the transformation of employee medical insurance outpatient service from "personal account" to "personal account + social pooling" model, and then Guizhou Province issued corresponding documents in December 2021. Therefore, this paper focuses on the implementation measures and social impact of the reform of "outpatient mutual aid" in Guizhou province, and tries to put forward corresponding suggestions and strategies.

Key words: medical insurance; Outpatient mutual aid reform; Personal accounts; Pooled accounts

1. Introduction

According to the literature search, most of the domestic scholars' researches on mutual assistance in outpatient care are theoretical, and the research reports on empirical analysis are still lacking. Therefore, this report can provide institutional ideas for the research on the reform of outpatient mutual support policy, and provide a theoretical basis for the further improvement of the policy. At the same time, it can reduce the unstable factors in social development, so that fairness and justice can be better realized in the whole society, and people's sense of gain and happiness can be significantly improved, thus improving people's well-being.

2. Literature Review

2.1 Review of foreign research

Most of the research by foreign academics has focused on Medisave accounts in Singapore. Singapore's Medisavit protection model is a form of retaining the risk of loss of medical expenses by accumulating personal accounts to reduce the medical expenses required for illness of family members. On the basis of Singapore's medical insurance model and in combination with its own national conditions, China has explored a system of "combined accounts" for employees' medical insurance with Chinese characteristics.

2.2 Review of domestic research

After the introduction of the reform of mutual assistance in out-patient care, some scholars analyzed domestic policies from the aspects of the guarantee level of medical insurance pooling fund, the inclusion and application scope of personal accounts, and the reform of payment methods, and found that the level of out-patient pooling guarantee in different provinces and cities varies greatly, and the level of equalization is low (Huang Wei, 2023). By forecasting the changes of the employee basic medical insurance pooling fund balance and personal account balance in Guangzhou and other places, a plan was proposed to increase the proportion of outpatient pooling and payment for cities with sufficient pooling fund balance (Xie Peixuan, 2021).

3. Sampling design

In this paper, urban workers in 9 cities and prefectures (regions) of Guizhou Province were selected as the survey objects. PPS sampling and random sampling were adopted to ensure the representativeness of the samples, and the sample information was collected by questionnaire survey and interview survey.

$$n_0 = \frac{t^2(1-P)P/d^2}{1 + \frac{1}{N} \left[\frac{t^2(1-P)P}{d^2} - 1 \right]}$$

Where N is the total quantity, d is the absolute allowable sampling error, and p is the sample proportion. In the actual survey, the sampling proportion is often determined as 0.4, that is, the proportion of respondents is 40%, and the confidence degree is 95%, then $t=1.96$ can be determined. In the sampling process, we set the absolute permissible sampling error to be 3%. Since the total number of employees with medical insurance in Guizhou Province is $N=4740000$, the approximate optimal sample size can be obtained as follows:

$$n_0 = \frac{t^2(1-P)P}{d^2} = \frac{1.96^2 \times 0.4 \times 0.6}{0.03^2} = 1024.43$$

Therefore, the sample size is no longer corrected, and the approximate best sample size is determined with $n=1024$. By using the Deff value, the effective sample size is 1283, and the actual number of questionnaires issued is 1509.

According to the sample size formula and the population data provided by the Statistical Bulletin of Guizhou Province's National

Economic and Social Development in 2021, the multi-stage sampling design was made as shown in the following table.

Table 1 Table of sampling stages

Stages	Sampling unit	Sampling method
First stage	Municipal Districts	Quota allocation
Stage 2	County-level districts	Equal distribution
The third stage	Township level administrative District	Simple random sampling

According to statistics, a total of 1509 questionnaires were issued and 1385 were recovered, of which 1283 were effective, and the recovery efficiency reached 85.02%, which was ideal. The sample information mainly includes basic indicators, medical treatment behavior, satisfaction evaluation, etc.

4. Data analysis based on Chi-square goodness fitting test

In order to better focus on the key objects of concern in the investigation process, the data are analyzed as follows based on the Chi-square goodness fitting test.

Table 2 shows the response rate and penetration rate of key links

item	Response		Penetration rate (n=1283)
	n	Response rate	
The setting of the minimum and maximum payment limits	697	15.93%	54.33%
Improve the way personal accounts are credited	732	16.73%	57.05%
Expand the scope of personal accounts	840	19.20%	65.47%
Improve the accessibility of general outpatient service for insured persons	837	19.13%	65.24%
Expand the range of chronic acute disease outpatient diseases simultaneously	678	15.49%	52.84%
We will increase publicity for reform policies	576	13.16%	44.89%
Other	16	0.37%	1.25%
Summary	4376	100%	/
Goodness of fit test: $\chi=2774.052p=0.000$			

The goodness of fit test showed significance. Among them, the response rate of "setting the minimum payment standard and the maximum payment limit" is 15.93%, and the penetration rate is 54.33%. Similarly, "improving the personal account accounting method", "expanding the scope of application of personal account", "improving the convenience of general outpatient medical treatment for insured persons" and "setting the starting payment standard and the maximum payment limit" are the objects of our focus.

5. Research on the understanding of the reform and system construction

5.1 The understanding degree of the insured to the outpatient mutual aid system

Through the overall analysis of the questionnaire, more than 60% of the employees' medical insurance participants in 9 cities and states in Guizhou Province said that they did not know much or did not know much about the outpatient mutual assistance security mechanism.

5.2 The minimum payment, maximum payment limit and personal account expenditure

Among the questions about the setting of the starting payment, 38.5% of the enrollees think it should be set at 100 yuan; In terms of the maximum payment limit, 45.05% of the participants thought it could be set at 3,000 yuan or above; When it comes to paying medical expenses on personal accounts, 85.34 percent of enrollees spend less than 2,000 yuan on their personal accounts.

5.3 Focus on the reform of mutual assistance in outpatient clinics

One is the personal account accounting method. The outpatient mutual aid reform has led to a significant reduction in the funds transferred to the individual accounts of the insured, which is difficult for many insured people to accept in the short term. The second is the scope of application of personal accounts. The scope of application of personal account is closely related to the cost burden of the insured, and it is the key link that the insured pays attention to. The third is the convenience of general outpatient service. The insured are especially concerned about the convenience of medical treatment, such as the increase in the flow of people, long queuing time and cumbersome reimbursement process.

6. Research on the correlation of employee mutual aid in outpatient department in Guizhou Province

6.1 Influencing factors of outpatient mutual aid reform on medical treatment choice

The location and per capita annual household income of employees insured in Guizhou Province have a key impact on the choice of

medical treatment by outpatient mutual aid reform. The more developed the regional economy and the higher the per capita annual family income, the more willing the insured people are to choose the higher level of medical institutions.

6.2 Influencing factors of outpatient mutual aid reform on drug purchase path selection

The location and per capita annual household income of the insured employees in Guizhou Province have an important impact on the choice of drug purchasing channels. The participants with slower regional economic development and lower per capita annual family income were more inclined to go to medical institutions to purchase drugs.

6.3 Factors influencing the degree of policy understanding

Due to regional differences, core regions, such as provincial capitals, have greater publicity and better effect on new policies and systems.

7. The impact of outpatient mutual aid reform

7.1 Positive Impact

First, it will improve the efficiency of fund use and improve the fund balance of individual accounts; Second, the employees' right to medical insurance is further protected, so that the insured people have a stronger sense of gain; Third, social conflicts caused by the gap between the rich and the poor can be effectively alleviated, and social equity and justice can be better demonstrated; Fourth, in response to the development requirements of the new era, a more comprehensive medical security mechanism has been established.

7.2 Negative Impact

The insured believed that the negative impact of the reform of outpatient mutual assistance was mainly caused by the reduction of personal account funds, the reduction of security, the worry about excessive medical treatment and the corresponding increased cost burden, and the worry about the inadequate diagnosis and treatment of diseases in primary medical institutions. Due to the incomprehensive understanding of the policy by the insured, other potential risks may also be brought to the promotion of the policy.

8. Suggestions and strategies

8.1 Increase policy publicity

First, we will publicize policies through online public channels such as official government websites and public accounts. The second is to hold policy interpretation meetings and question and answer meetings at the grassroots level such as units and communities to explain relevant policies in detail, and to compare horizontal and vertical accounting with the old methods; The third is to increase the policy training of the staff of the medical insurance handling window and the government service hotline to improve the level of answering questions; Fourth, we should smooth the channels for people to complain and give feedback, and respond to the interests of the people in a timely manner.

8.2 We will focus on strengthening community-level medical institutions

In combination with the "Guizhou Medical Talent Plan" supported by the National Health and Health Commission, increase the training of medical and health talents in the province, introduce high-level medical and health talents from outside the province, and give play to the leading role of third-level public hospitals in the province. It is necessary not only to promote the sinking of high-quality medical resources, but also to cultivate the grassroots own strength.

8.3 Improve fund supervision measures

Establish and improve the province's unified medical insurance supervision system, unify the supervision rules and standards of outpatient services, improve the intelligent level of supervision, and severely crack down on all kinds of fraud and insurance fraud. At the same time, the construction of the Internet system platform should be improved to overcome the difficulties and blocking points of medical insurance reimbursement.

8.4 Take the overall planning of general outpatient clinics as an opportunity to guide hierarchical diagnosis and treatment

Implement the overall planning of general outpatient clinics, promote the contracted services of family doctors, strengthen the health management of chronic diseases through grid classification, increase the treatment of common and frequently-onset diseases, early intervention and routine management of diseases, ensure the drug supply of primary medical institutions, and encourage the insured people to "catch early and catch small".

8.5 Accelerate the establishment of the "prescription circulation" platform

In accordance with the national "dual channel" management requirements, accelerate the establishment of a unified "prescription circulation" platform across the province, and implement a unified reimbursement policy on the basis of strict fixed-point, guaranteed supply, standardized use, and strengthened supervision. Medical institutions should simplify the prescribing process and set up convenient outpatient clinics. After prescribing, patients can independently choose to buy drugs in hospitals or pharmacies on the platform, which can offset the impact of reform and provide better services to the insured.

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