

## Research on the Integration of Medical Security System Under the Background of Urban-Rural Dual Structure

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### Abstract

Since the founding of the People's Republic of China, due to the development needs of the industrialization era, it has gradually formed a distinct urban-rural dual structure. The dualization of urban and rural areas is not only reflected in the level of economic and social development, but also in public education, medical and health care, labor and employment. At present, China's basic medical security system is characterized by "fragmentation" and "dualization". This feature prevents the fairness of the social security system construction, liquidity and sustainability. This paper takes the urban and rural dual structure based on the cause of medical security system fragmentation, the current urban and rural integration level of treatment and medical institutions, medical resource allocation operation and health care as a whole hierarchy analysis. The research obtains that the urban and rural medical insurance plan as a whole level must improve, establish a stable public financial input mechanism, guarantee the health fair, set up different parts of the health care system switching mechanism.

### Keywords

Urban-rural dual structure, Medical security, Fragmentation, Integration.

### 1. Introduction

The cooperative medical system can be traced back to the Anti-Japanese War, when the system was still in the embryonic stage. After the founding of the People's Republic of China, the country's weak economic strength can only provide medical security by the way of differences between urban and rural areas. In the vast rural areas, security issues gradually fade out of people's vision. People living in a stable environment began to pursue the establishment of the social security system. Low levels of productivity, poverty and disease limit life expectancy. Therefore, medical security is an indispensable part of the establishment of social security system. However, due to the background of industrial development at that time, China separated the population and restricted the free movement of rural members according to the nature of agricultural and non-agricultural household registration. For example, on December 18, 1957 the state council issued "about preventing rural population blind drain instructions" that rules "from the enormous outflow of rural population not only reduce rural labor force and reduce the basis for the supply of the urban development, increased the city people's employment pressure, the rural population should be put into agricultural production, do not allow the blind drain". The urban-rural dual structure was established. The dual structure should have the dual medical security system. Rural areas are the weak link in the establishment of social security system. Compared with urban areas, rural medical security deserves more attention. Since then, China's rural medical security system has been explored for decades. Different medical security systems have been formulated under different historical backgrounds. In the 1950s, China formulated the rural cooperative medical care system. People's communes were the support of the organization of the medical security system. The insured paid a certain premium every year. [1,2] Although this medical insurance system did not achieve universal coverage, it alleviated the poverty caused by diseases among some rural people and the lack of access to medical services, thus playing the role of medical security for the people in this era. In the 1970s, agricultural production cooperatives disintegrated and the household contract responsibility system was implemented. The medical security system has lost its supporting organization, so it is difficult to exist naturally. The household contract responsibility system is characterized by independent profit and loss and independent

operation, which highlights the independent living mode of the self-employed and severely limits the development of rural cooperative medical care. The number of people participating in the insurance system has dropped sharply. In 1989, only 5% of the regions in China insisted on the development of cooperative medical care. [3] In rural areas, poverty due to illness and the return to poverty due to illness have gradually become the norm. So, from the 1970s to the 1990s there was a hiatus in health care. In 1992, the 14th national congress of the communist party of China promulgated the decision on several issues concerning the establishment of a socialist market economy system, which pointed out that "develop and improve the system of rural cooperative medical care". In 2002, the state council issued the decision on further strengthening rural health work, requiring governments at all levels to actively guide farmers to establish a new type of cooperative medical security system, referred to as the "new rural cooperative medical care system". This system is a relief system that encourages and supports farmers to participate in insurance voluntarily, and the public welfare funds are raised by the government, the society, individuals and other diversified subjects. This system has achieved great results in more than ten years of operation, effectively solving the problem of "difficult to see a doctor" and "expensive to see a doctor". However, the gap between urban and rural dual structure has been widening for many years in China, and there are huge differences between urban and rural medical insurance systems and even the whole social security system. Under the influence of this structure, the fragmentation of the medical security system has become an obstacle to the building of a moderately prosperous society in all respects, and measures should be taken to solve it.

## **2. Organization of the Text Analysis of the reasons for the integration of the medical security system under the background of urban-rural dual structure**

Urban and rural areas are interrelated organisms, and it is a good state of integrated development to promote agriculture through industry and rural areas through urban development. But there are different policies to support economic and social development in different times. The fragmentation of the urban and rural medical security system stems from the institutional design of the urban-rural dual structure formed by the development needs of national conditions. In order to get rid of the state of poverty in the early years of the People's Republic of China, we vigorously developed the economy. Under the planned economy system, the industrial production needs the supply of factors of production, while the migration of rural population to the city reduces the labor force supplied by factors, and increases the employment pressure of urban population. In this state of development, the state has introduced a series of measures to control the flow of rural labor to the city, which, on the whole, shows a situation of "valuing the city over the town", thus building and deepening the urban-rural dual structure. After years of development, the income level of urban and rural residents has gradually widened. Different social security systems need to be built under different income levels. Medical and health care, as a part of social security, has naturally been divided into different levels. Cities enjoy high-level medical and health services with a high income level and a complete social security system, while rural areas with a low income level can only enjoy low-level medical and health services. Therefore, the urban-rural dual structure leads to a huge gap in medical resources and health care enjoyed by urban and rural residents. [4] From 2000 to 2011, the average ratio of per capita medical insurance cost in urban and rural areas was 3.59:1, with a maximum of 4.3:1. The per capita medical insurance cost in urban areas was much higher than that in rural areas.

With the increasing economic and social development of the urban-rural dual structure, the ability of rural residents to bear the cost of medical security gradually lags behind that of urban residents. This not only damages the rights and interests of rural residents to enjoy a better level of medical security, but also increases the difficulty of establishing the integration of social security. At the same time, the restriction of the household registration system prevents rural residents from entering the city to obtain a higher income so as to enjoy high-level medical services, making the "Matthew effect" more and more prominent. According to the statistical bulletin on the development of human resources and social security in 2008 and 2017, the total number of migrant workers was 225.42 million and 286.52 million, respectively, and the number of migrant workers participating in medical insurance was

42.66 million and 62.25 million, accounting for 18.9 percent and 21.7 percent, respectively. Affected by the split operation of the "dual track system" between urban and rural areas, the medical and health security system does not cover most migrant workers, and the centralized and fragmented medical insurance system with a large number of resources in urban areas continuously intensifies the conflicts and contradictions between urban and rural areas. Therefore, it is urgent to integrate the current medical security model as a whole.

The fragmented medical security system is reflected in the health costs, and the long-term solidification of the urban-rural dual structure makes the regional differences in the medical security system become more and more prominent, and the medical service level differences between different regions are also large. The medical insurance system for urban residents and the "new rural cooperative medical care system" under the social security system of "dividing the city and countryside" are typical manifestations of fragmentation. Although this kind of medical insurance system exists in a fragmented way, it basically covers all urban and rural residents. Due to the differences in medical security systems in different regions, there are many factors affecting fragmentation. Shandong province is a large agricultural and labor export province as well as a strong economy province, which is characterized by the dualization of urban and rural areas. Therefore, Shandong province is selected as the research object to illustrate the necessity of integrating the medical security system from the differences between regions. As shown in the following table (table 1):

Table 1. Comparison of medical services in different cities of Shandong province

region	Total number (10,000)	Number of insured (10,000)	Number of health institutions	Health facility staff
jinan	655.9	649.7	6030	104347
Qingdao	817.79	865.6	8028	102991
zibo	433.96	428.7	4777	49901
zaozhuang	422.56	371.7	2583	34322
dongying	196.68	202.9	1701	22155
yantai	653.87	631.7	5599	63772
weifang	914.15	839.8	7770	85992
jining	890.73	810.9	6937	80774
taian	572.98	534.2	4422	52462
weihai	256.54	253.3	2291	29131
rizhao	306.65	276.2	2534	24830
laiwu	129.40	120.7	1313	11777
linyi	1179.79	1038.1	7754	89112
Texas	597.84	527.4	5351	45206
liaocheng	644.7	561.7	5904	49189
binzhou	396.7	381.1	2895	34275
heze	1025.40	915	5623	81556

Note: the data are collected from Shandong statistical yearbook -2019.

As can be seen from the above table, the number of people participating in medical insurance in developed areas such as Jinan and Yantai accounts for 99% and 98.8% respectively, and the number of people participating in medical insurance in less developed areas such as Zaozhuang and Liaocheng accounts for 88% and 87.1% respectively. Although the medical security has covered the vast majority of people, the level of economic development has caused the difference in the level of medical security to some extent, and few regions have achieved full coverage. Moreover, the difference of urban-rural dual structure in economically developed areas is relatively insignificant. The rapid development of a city requires a large concentration of resources, and the resources in the city center are limited and difficult to meet the needs of development. Therefore, resources in rural areas need to supply cities. Industrialization drives urbanization, and the integration of urban and

rural areas into cities is rapid. In the less developed areas, the urban development speed is slow, the original resources can basically meet the current development demand, and the rural supply to the urban level is weak. The lack of resource mobility between urban and rural areas leads to the obvious difference between urban and rural dual structure. In the process of establishing the social security system, people in different regions require different service guarantees due to their different income levels. Social members in the city have a high income and a strong sense of security, so they are willing to pay higher security costs. Rural areas generally have low income and weak awareness of security, so they are willing to pay low fees. This difference in the dual structure of urban and rural areas naturally results in the "division of medical security".

### **3. Analysis of the process of integrating urban and rural medical security**

In 2016, the state council issued the opinions on the integration of the basic medical insurance system for urban and rural residents, which put forward the requirements of "six unification": the unification of coverage, the unification of financing policies, the unification of guaranteed benefits, the unification of medical insurance directory, the unification of designated management, and the unification of fund management. The promulgation of the opinion marks the gradual integration of China's urban-rural medical security system from the dual division. By the end of 2016, China has 30 provinces and xinjiang production and construction corps that deployed medical security system integration, including tianjin, Shanghai and other nine provinces in the documents of the State Council before the establishment of a unified integration system, with 22 provinces in the documents of the State Council issued the requirements of the "six reunification" after the process of the integration of urban and rural medical security. In 2017, more than 1 billion people participated in the medical insurance system for urban and rural residents. In 2018, the national healthcare security administration will be established to provide an overview of the integration of medical insurance, coordinate the treatment of medical insurance in urban and rural areas, and formulate unified payment standards for medical drugs, equipment and service items. In May 2019, the national health insurance bureau jointly the Ministry of Finance issued "about to do a good job of 2019 urban and rural residents basic medical insurance notice". This document points out that urban and rural residents per capita health care subsidies standards add 30 yuan and reach more than RMB 520 each person per year. The area of urban and rural residents medical system integration in the unfinished ensure the coverage of urban and rural areas, rates of not less than current levels based on the transition to a unified urban and rural residents health care system. The introduction of these gradual and integrated systems has gradually eliminated the fixed differences in medical security, promoted social equity, made the management of urban and rural medical institutions more standardized, convenient and efficient, and more conducive to the efficient use and safe control of national medical security funds. Through the joint efforts of the government and the society in recent years, the basic medical security system has made gratifying achievements, mainly reflected in the following aspects:

#### **3.1 Treatment level of urban-rural integration**

The integration of the medical insurance system has raised the level of overall planning and expanded the range of residents' choices, which was introduced in 2019. The notice on doing a good job in basic medical insurance for urban and rural residents in 2019 pointed out that the municipal level should be fully coordinated, unified handling of services, unified networking within the overall planning area and direct settlement in accordance with the requirements of the national medical business. Within the overall planning area, all insured residents are free to choose unified medical services without being restricted by other conditions, ensuring the unification of payment, coverage and service level, effectively promoting social equity and protecting residents' basic rights and interests. The unified medical service has improved the security level of rural residents and gradually increased the number of people participating in the insurance. The country has also raised the reimbursement ratio and financial subsidy standards, and the medical insurance directory enjoyed by residents has been constantly expanded. By the end of 2018, the number of people in China participating in medical insurance had reached 1.3445 trillion, an increase of about 750 million over 2014, and the coverage

reached more than 95 percent. This reflects the driving effect of the integration of urban and rural medical insurance systems on the overall scale of the insured population. The specific data are shown in the following figure (figure 1) :

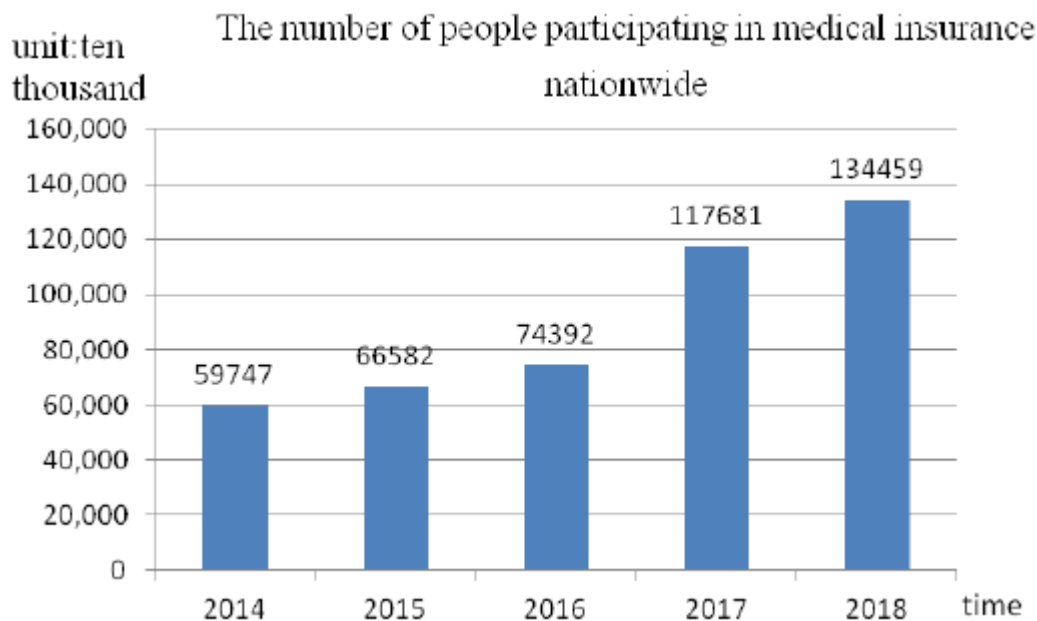


Figure 1 the number of people participating in medical insurance nationwide

Note: data are from the statistical bulletin on the development of human resources and social security undertakings.

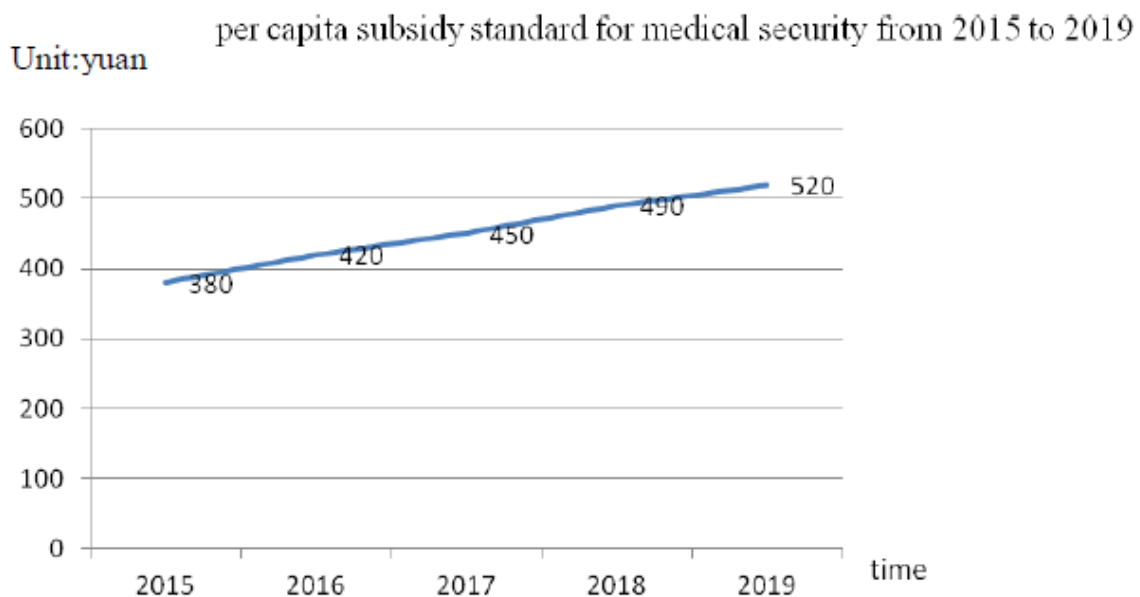


Figure 2 per capita subsidy standard for medical security from 2015 to 2019

Note: data are from the notice on ensuring basic medical care for urban and rural residents issued by the national healthcare security administration from 2015 to 2019.

Moreover, in order to better protect residents' rights and interests and expand the scope of medical services they enjoy, the state keeps enriching the drug directory so that residents can choose the category suitable for their reimbursement when diseases occur. 2019 national health insurance bureau

fan club department jointly issued by the national basic medical insurance, industrial injury insurance and maternity insurance drug catalogue, which includes western medicines and proprietary Chinese medicine, a total of 2643, compared with 2017 drug species increased 55. On the one hand, It increases drug directory support capability, improves the capital use efficiency, enhances the residents' medical satisfaction. On the other hand, the increase of alternative drugs available to urban and rural residents can actively reduce the medical expenses and fully guarantee the availability of medical treatment for the sick. The specific data are shown in the following figure (figure 2).

It can be seen intuitively from the chart that the subsidy standard has been rising continuously for five consecutive years, which is the overall requirement at the national level. Due to the difference in economic development level, the reimbursement ratio of different regions is different, so the provincial finance will increase the inclination of the poor regions and reduce the differences between different regions and between urban and rural areas to build an integrated medical security system.

### **3.2 Medical institutions operate with greater efficiency and refinement**

In the period when medical security was divided between urban and rural residents, medical services were often managed by the medical insurance department, the health department and the civil administration department in different ways, resulting in high management cost and low efficiency.[5] The complex processing process and remote medical settlement increase the workload of the medical institutions, resulting in unclear thinking of the staff, excessive consumption of time and energy, and unclear responsibilities of the medical institutions. This medical service system is undoubtedly a barrier to the protection of residents who are not aware of the operation process of medical business. Rural residents, the majority of the total population, enjoy decentralized, low-level services. In developed cities, resources are largely concentrated, and urban residents who account for a relatively low proportion of the total population enjoy highly concentrated and specialized high-level services. This gap did not begin to change until the national integration of urban and rural health insurance systems. In the process of integration, the responsibilities of the departments of medical institutions have been straightened out, the reimbursement process has been simplified, and the settlement between different hospitals can be connected to each other, thus improving the service efficiency.[6] Later, the establishment of the national healthcare security administration integrated and unified management of medical insurance and formulated unified operating rules, which put an end to the situation of multi-headed management in the past. The introduction of the information management system facilitates the establishment of a mechanism for determining the medical treatment of all types of personnel, gives full play to the role of the social security card, strengthens the monitoring of major diseases of the whole insured personnel, and provides feedback for the development of the medical cause. More importantly, the rapid development of primary medical and health services has facilitated the improvement of residents' security. Because when residents have diseases, primary medical institutions are the quickest to contact and the first place to choose medical treatment. When the medical staff in the community or health center cannot diagnose the disease, they need to go through the procedures to a higher level medical institution for treatment. This medical treatment method improves the residents' trust in the primary medical institutions, avoids the blind choice of senior hospitals for treatment when the disease occurs, reduces the cost of medical treatment, and makes rational use of resources. By 2018, the number of grassroots medical institutions in China reached 943639, an increase of 10615 compared with 2017, the number of towns and townships, 36461, the village clinic 622001, outpatient number 249654, 34997 community health service centers, these constitute the medical security system in medical institutions of each node, made a great contribution to the protection of the rights of urban and rural residents.

### **3.3 Unreasonable allocation of medical resources**

In recent years, the integration of the medical security system has made some gratifying achievements and exposed some Urgent problems to be solved. The medical resources enjoyed by poor and backward areas are still far from those in cities and towns. The mobility of resources between urban and rural areas is poor. According to data released by medical institutions in 2018, there were 10.91

health technicians per 1,000 people in urban areas and 4.63 in rural areas. The uneven distribution of medical resources has not been completely changed in the process of the integration of urban and rural medical security systems. According to statistics, the number of rural and health workers nationwide was 10,324 in 2016, down to 907,098 in 2018, a decrease of 93,226. The reasons for this gap are various. First, the gap in economic conditions makes the salary income, treatment standard and equipment used by rural medical personnel unable to meet their own needs. Second, the long-term development makes the urban conditions superior, the medical technology is high, the service quality is good, the patient pays attention to the hygiene, the medical staff has received the good training. But the rural medical condition is poor, the resources are insufficient, the technology is backward, the majority of the professional staff have not received the specialized training, the outstanding medical staff rarely devotes to the countryside; Third, the government actually favors the investment and construction in cities and ignores the rural areas, resulting in a shortage of funds, obsolete equipment and low level, which leads to frequent and uncontrollable diseases in rural areas, and the residents' basic rights and interests are not fairly protected.[7]

### **3.4 Medical security coordination level is low**

At the present stage, China is fully implementing the city-level overall planning and gradually getting rid of the narrow county-level overall planning. To some extent, it has alleviated the difficulty of residents' demand for medical treatment in other places, but there are still obstacles when major diseases need to be transferred to hospitals across the region for treatment. It is mainly manifested in the following aspects:

With different medical insurance systems, there are various procedures for medical treatment in different places and different reimbursement rates in different regions. The medical burden makes the insured feel that the role of medical security is weak, which reduces the efficiency and influence of medical insurance.

In addition, the difference between urban and rural structure has not been solved, and the difference in medical treatment level leads to agriculture. The large-scale transfer of village patients to urban medical institutions has increased the demand for off-site medical treatment.[8] The ginseng protects a person's account to be in the out-of-town reimbursement outside plan as a whole and cannot obtain the benefit that insurance conformity brings. In most areas, the medical insurance accounts of urban and rural residents are only combined, and the system of "dispatching fund" is adopted instead of unified management, which can only be used within the overall planning scope. The separate operation of the two health insurance accounts reduces the ability to withstand risks.

In some areas, residents are covered by the "file system", with individuals choosing "low cost and low standard" or "high cost, high standard" protection level according to their own needs Standard. This practice is unfair and should be improved. The wealthy, who have higher incomes and more money to spend on health care, choose the "high cost, high standard" category. The income level of the middle and lower classes is limited, and they do not have a high bearing on the medical insurance cost, so they will choose the level of "low cost, low standard". Therefore, the practice of sub-scale financing for different medical security has not substantially changed the difference in medical services brought by the urban-rural dual structure.

## **4. Measures to improve the integration of Medical Security System**

Through efforts and explorations in recent years, China has basically established a medical system to guarantee the health of the whole people, which, to some extent, has alleviated the problems of "difficulty" and "high cost" of medical services for residents, and has made phased achievements. However, there are some problems in medical resource allocation, fairness and overall planning. Therefore, China needs to speed up the realization of the medical security system in line with the goal of building a moderately prosperous society in all respects, so as to lay a good foundation for the building of a great modern socialist country.

#### **4.1 We will improve the overall planning of medical insurance in urban and rural areas**

Raising the pooling level will help expand the coverage of medical treatment with equal treatment and promote social equity. It will also help urban and rural residents to get rid of the difficult situation of poverty caused by disease. At present, China is fully implementing the city-level overall planning level and unifying the medical security service system within the city-level region. Cities with mature pooling can take the lead in starting provincial pooling to further improve the convenience of the choice range of medical needs for urban and rural residents. At the same time, the national level should establish a comprehensive medical service platform, gradually access the national comprehensive service platform in the regions where provincial pooling is implemented, and finally realize a medical security system with unified business processes, unified treatment standards, resource sharing and big data management for medical treatment nationwide. The formation of this national pooling system has relieved the worries of migrant workers who go to hospital for medical treatment and those who go to hospital for serious diseases. It can allocate medical resources more efficiently and fairly, strengthen the unified supervision of medical institutions, control unreasonable expenses, and make medical services more recognized by patients.

#### **4.2 We will establish a stable mechanism for public financial input to ensure health and equity**

The integration of medical security should be based on the principle of fairness and justice and distributed according to needs. Economic and social development in different regions. With different levels of development, local residents have different needs for medical and health services. The government should increase financial investment in medical treatment in poor areas, directly purchase factors of production for medical treatment by the government, directly subsidize the income of medical personnel to improve their enthusiasm for work, and increase support for grassroots medical teams to strive for health and equity.[9] Residents can pay for medical financing according to their own economic capacity and establish a risk mechanism to guarantee medical financing in the society. Of course, in order to avoid the inflation caused by the government's direct purchase of factors of production, thus affecting the rise of medical costs, the government needs to formulate a scientific and reasonable expenditure budget and strengthen the scientific and standardized hospital purchase expenditure. In addition, the government of the development of the current "step" financing plan adjustments should be made to pay the expenses for different people of different income levels. They can enjoy different medical services, but should be based on basic medical service safeguard all residents, medical service chain extension of the high-income people, such as from the rich to provide health care, medical rehabilitation training, professional nursing care, care, etc., to realize the fiscal financing, financial expenditure of the fair and efficient.

#### **4.3 We will establish a mechanism for transferring medical insurance systems between different regions**

At present, China still has a long way to go from the national pooling of medical services. Different social groups often go to live in other places due to different needs such as work and study. Such labor mobility is an inevitable phenomenon, which brings great challenges to the integration of the medical system. In order to make the medical security efficient and convenient for the majority of residents, greater flexibility should be introduced in the process of medical security integration. The smooth docking of the medical insurance systems in different regions mainly starts from the following two aspects: first, the state provides adjustment funds for the labor floating population to participate in the insurance in different places, so as to make up for the imbalance of insurance costs in different regions. The inflow of labor can promote regional consumption, production and employment, so such compensation is necessary. The second is to use big data to manage the information of the floating population participating in insurance, so as to avoid the problems of repeated participation and omission of participation, accelerate the establishment of a mechanism for handling and coordinating the transfer work of the medical insurance system, and finally build a medical service model with the Internet as the core.



## 5. Conclusion

The integration of the medical insurance system is a complicated and arduous project to improve people's livelihood. The imbalance between urban and rural areas and between regions determines the necessity of medical insurance system integration. On the whole, the economy is developing rapidly and the medical resources enjoyed by the residents are increasing. Specific to the thousands of households, the development of medical services appears to be a long way to go. In the current situation where the urban-rural dual structure is not deeply integrated, we should speed up the improvement of the medical security system and let every insured person feel the tangible benefits brought by the medical security, so that rural residents will no longer become poor due to illness or return to poverty due to illness. On the premise of ensuring basic medical services for all residents, we will speed up the establishment of a medical service system with little difference.

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