

Reducing the medical economic burden of health insurance in China: Achievements and challenges

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Summary

The aims of this study were to describe health insurance reforms initiated by the Chinese government over the past two decades, to review their achievements in reducing the medical economic burden, and to summarize the challenges that still exist regarding a further reduction in out-of-pocket expenditures in this country. China has successfully attained the goal of providing health insurance coverage to almost the entire population by developing a mixed health insurance system, which consists of Urban Employees Basic Medical Insurance (UEBMI), Urban Resident Basic Medical Insurance (URBMI), New Rural Cooperative Medical Scheme (NCMS), and supplementary Catastrophic Health Insurance. Despite this achievement, China is still facing the challenges of a disparity in the medical economic burden by region and by health insurance scheme, relatively little protection from financial risk compared to developed countries, as well as low efficiency and quality of care under current payment systems. To further reduce the disparity in the medical economic burden and to increase the overall protection from financial risk in China, the Government should increase central government transfers to NCMS and URBMI enrollees in poor regions and increase the total amount of government subsidies to NCMS. In addition, China should improve the efficiency and quality of health insurance by further reforming the payment system.

Keywords: Out-of-pocket expenditure, health insurance, health care expenditure, China

1. Introduction

Between 1950 and 1980, the vast majority of Chinese residents were covered by urban or rural health insurance schemes. Since the late 1980s, however, the traditional rural health insurance scheme collapsed and traditional urban health insurance schemes were crippled due to the inefficiency and debt of state-owned enterprises. Since then, the Chinese population has been faced with considerable out-of-pocket (OOP) expenditures (1). From 1990 to 2001, OOP expenditures grew tenfold, and the share of OOP expenditures increased to 59.97% in 2001 (2). However, per capita income grew only five- or fourfold during the period (3). Such a large medical

economic burden resulted in a very large proportion of the population facing catastrophic expenditures and impoverishment due to OOP health expenses (4). Social health insurance has been as a primary focus of efforts to provide financial protection from illness-related costs for the Chinese population and populations in other low- and middle-income countries (5). Over the past two decades, the Chinese government has been working to reduce residents' medical economic burden through various health insurance reforms with the aim of achieving universal health coverage (UHC) by 2020. This paper will first describe health insurance reforms initiated by the Chinese government over the last two decades, and it will then summarize their achievements in reducing the medical economic burden. This paper will then focus on the challenges that still exist regarding a further reduction in OOP expenditures in China.

2. Health insurance reforms and their achievements in reducing the medical economic burden

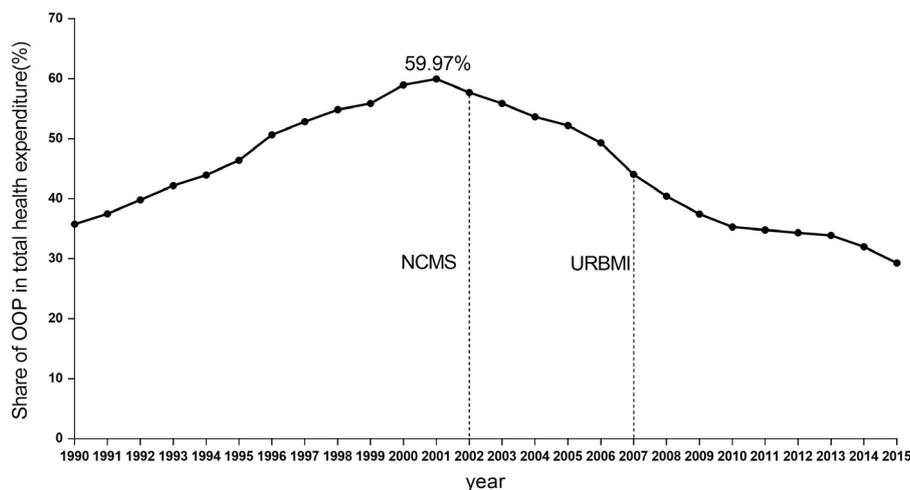
Health insurance reforms over the last two decades have

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Source: Statistical Yearbook of Health and Family Planning in China 2016

Figure 1. OOP expenditure share of health expenditure in China (%).

occurred in two major stages: establishing and initially developing health insurance schemes from 1994 to 2008, and further reforming health insurance schemes in a comprehensive manner from 2009 to the present.

The first stage of health insurance reforms started with a pilot project in Jiujiang and Zhenjiang to replace traditional urban health insurance schemes. Based on experiences in those two cities, the Chinese government formally established a mandatory social insurance program for urban employees - Urban Employees Basic Medical Insurance (UEBMI) - in 1998 (6). UEBMI is financed through payroll (8-14%), from both employer (6%) and employee (2%) contributions.

In late 2002, the Chinese government decided to establish the New Rural Cooperative Medical Scheme (NCMS) for rural residents in order to rebuild the rural health insurance scheme. In the NCMS, premiums come mainly from the central and local governments while the rest comes from individual contributions (7). As shown in Figure 1, the share of OOP expenditures out of total health care expenditures has decreased every year since 2002 as the number of participants in NCMS has increased.

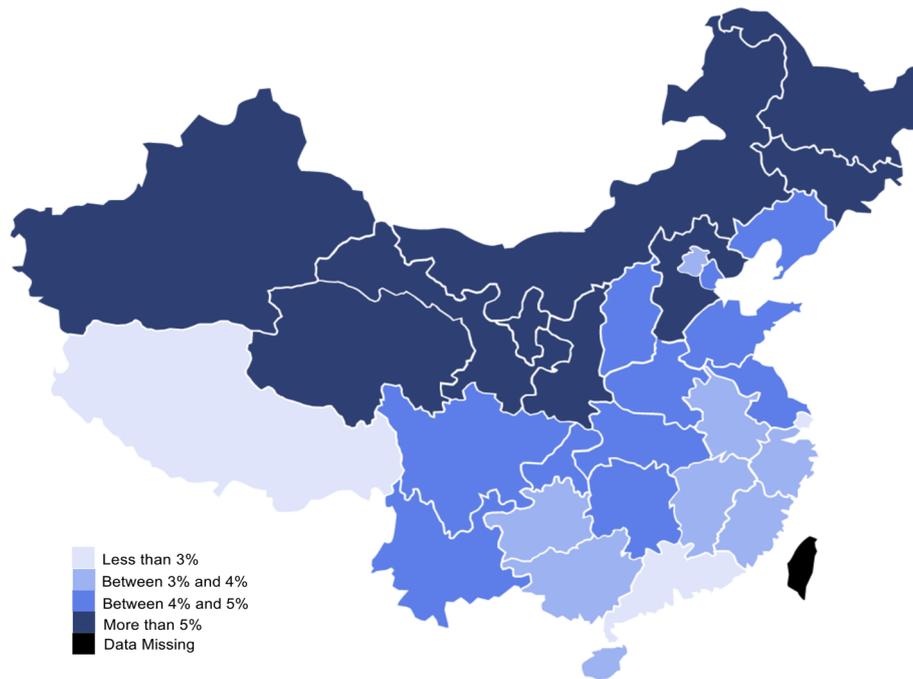
After the implementation of UEBMI and NCMS, the only groups not covered by basic health insurance were children, students, the elderly, the disabled, and other unemployed populations in urban regions. Therefore, the Chinese government established Urban Resident Basic Medical Insurance (URBBI) for those groups in 2007 (3,8). URBBI is also mainly financed by the government, and urban families only contribute a small share of premiums (2).

Although the three basic insurance schemes covered 87% of the total population in 2008, the expense of seeing a doctor was a common problem at the time (9). The ratio of OOP expenditures per capita to household expenditures per capita dropped slightly (10). In addition, NCMS and URBBI offered relatively few

benefits compared to UEBMI in 2008. The inpatient reimbursement rate is 38% for NCMS, 44% for URBBI, and 67% for UEBMI, and the NCMS and URBBI schemes covered few outpatient services in 2008 (11). In light of the lack of financial protection from risk, the Chinese government initiated a new series of health sector reforms in 2009 that explicitly described the expansion of basic health insurance schemes as one of their primary objectives (12). Since then, the Chinese government has been committed to further reforming health insurance schemes in a comprehensive manner.

In the new series of health sector reform, the Chinese government first increased government subsidies to NCMS and URBBI to an unprecedented scale. In 2008, the Government provided 80 RMB/person/year to each participant in NCMS and URBBI, while in 2016 this amount rose to 420 RMB/person/year (13). Accordingly, benefits under the two insurance schemes were greatly increased. In 2012, the inpatient reimbursement rate and the outpatient reimbursement rate of the two insurance schemes both increased to 55% and 50%, respectively (11).

To further reduce the medical economic burden, the Government decided to launch Catastrophic Disease Insurance in 2012 (14). This scheme is financed by basic health insurance funds and is managed by commercial insurance companies. It provides the same coverage as that of basic health insurance, and its participants are covered by basic health insurance as well. Participants are allowed to receive extra reimbursements for medical expenses after they are reimbursed by basic health insurance. The specific reimbursement rate is defined at the local level, but the central government required that the rate of extra reimbursement be no less than 50%. In 2013, more than 200 million people participated in Catastrophic Disease Insurance (15). In 2015, the Catastrophic Disease Insurance scheme was fully implemented in China (16).



Source: Statistical Yearbook of Health and Family planning in China 2017, China Statistical Yearbook 2017

Figure 2. OOP per capita as percentage of average annual disposable income per capita of each province in 2015 (%).

Moreover, in 2009, the Chinese government began attempting to integrate NCMS and URBMI, which means unified funding pools, levels of benefits, and payment systems for NCMS and URBMI. Afterwards, many provinces or municipalities such as Tianjin, Chongqing, and Guangdong integrated NCMS and URBMI. In early 2016, the Chinese government announced that it was promoting the integration of NCMS and URBMI nationwide (17). In recent years, the integration of NCMS and URBMI has proceeded at a faster pace. This integration has received strong support from the Chinese population, and especially from rural residents (18). Suzhou, Shenzhen, Dongguan, and Zhongshan have gone even further by consolidating UEBMI, NCMS, and URBMI at the same time.

In addition, the payment mechanism also influences OOP expenditures (19,20). Fee-for-service (FFS) was previously the only common mechanism of payment in China. Under an FFS system, payment is made after care, so physicians are inclined to provide more services, which result in huge health care expenditures (21). In 2009, the Chinese government decided to replace FFS with other forms of prospective payment. In recent years, prospective payment systems such as the global budget payment system (GBPS) have been implemented in most provinces. In mid-2017, the Chinese government decided to fully implement a compound payment system based on DRGs and to further reduce the use of FFS, signaling the implementation of payment reform nationwide (22).

After more than two decades of considerable efforts, the three schemes (*i.e.* UEBMI, NCMS, and URBMI) combined have ensured coverage for almost the entire

Chinese population, with rates currently approaching 95% (2,23). Moreover, the share of OOP expenditures out of total health care expenditures finally dropped to 29.27% in 2015, thus halving the share in 2001 (Figure 1).

3. Challenges still exist regarding a further reduction in OOP expenditures

Even though China has made startling achievements in extending health insurance coverage and in reducing OOP expenditures in such a short time, difficulties still exist regarding a further reduction in the medical economic burden and fully achieving the goal of UHC.

Regional disparities represent the greatest challenge. Eastern China has a much higher level of economic development than middle and western China, and middle China is less developed than western China. Figure 2 shows the percentage of OOP payments per capita with respect to the average annual disposable income per capita by province in 2015. Populations in Ningxia and Shaanxi Province respectively spend 6.46% and 6.24% of their annual disposable income per capita on OOP health expenses, and these figures are almost 2 times what the populations in Guangdong Province and the City of Shanghai spend. In general, the medical economic burden is much smaller in southeastern provinces than that in other regions. In addition, a higher percentage of individuals do not receive care due to financial reasons in middle and western regions than in other regions (Table 1). Thus, the level of economic development is inversely associated with the medical economic burden.

A disparity in the medical economic burden exists

Table 1. Reasons why individuals were not treated in 2013 (%)

Reason	Total	Urban				Rural			
		Total	East	Middle	West	Total	East	Middle	West
Self-healing	69.8	71.0	73.8	73.3	68.0	68.1	72.2	69.8	61.5
Economics	7.6	7.7	4.5	10.5	8.3	7.4	4.4	6.9	11.5
Inconvenience	5.2	5.6	6.8	5.0	5.1	4.6	5.3	4.8	3.6
No time	4.5	4.2	4.5	2.5	4.9	4.9	3.8	4.8	6.3
Other	13.0	11.6	10.4	8.7	13.7	15.0	14.3	13.8	17.1

Source: An Analysis Report of National Health Services Survey in China, 2013.

among the three basic insurance schemes. Studies have found that after the three health insurance schemes were consolidated, NCMS had an inpatient reimbursement rate of 52.5% and an outpatient reimbursement rate 56% in Suzhou in 2014, and these rates were about 20% lower than those of UEBMI and URBMI (24). This is because NCMS still provides fewer benefits than the other two health insurance schemes.

In addition, China faces the challenge of relatively little protection from financial risk due to catastrophic medical expenditures despite a series of health insurance reforms (25). The share of OOP expenditures out of total health care expenditures in China is still much higher than that in higher income countries (26). According to a report by the World Health Organization on UHC worldwide in 2017, 17.7% of the Chinese population spent greater than 10% of their household budget on OOP health payments, which was much higher than that in OECD countries (27). Currently, more than 40% of the poor population is impoverished due to illness, and this rate has increased in recent years (28).

Moreover, the payment mechanisms currently used in China have led to difficulties in reducing OOP expenditures. GBPS and FFS are the two main payment systems in China, and local governments usually use a single payment system (29). FFS may lower the efficiency of health service utilization by providing unnecessary services (21). GBPS is proved to have a greater influence on total health care expenditures than on OOP expenditures (30). Moreover, GBPS could reduce the quality of medical services and hospital efficiency by rejecting critical patients and shortening the duration of hospitalization (29,31-34). In light of those circumstances, the Chinese government is promoting a compound payment system based on DRGs that has proven to be able to control expenditures without affecting the quality of medical services in other settings (35). Payment system reform is a challenge worldwide, and further studies are needed to evaluate the actual effects of the latest reform of payment systems in China.

4. Conclusion

Over the last two decades, the Chinese government has been devoted to reducing the medical economic burden through health insurance reforms. This started with the

establishment of three health insurance schemes, *i.e.* UEBMI, URBMI, and NCMS. Health insurance has subsequently been reformed to attain the goal of UHC by 2020, including greater benefits under the three insurance schemes, establishment of catastrophic insurance, consolidating NCMS and URBMI, and transformation of the payment system. After more than two decades of efforts, the share of OOP expenditures out of total health care expenditures decreased to less than 30%, and more than 95% of population was covered by a health insurance scheme in 2015. However, China is still facing the challenges of a disparity in the medical economic burden by region and by health insurance scheme, relatively little protection from financial risk compared to other developing countries, as well as low efficiency and quality of care related to the current payment systems. In light of China's achievements in providing protection from financial risk, the most critical element of that effort's success is substantial government involvement. To further reduce the disparity in the medical economic burden and to increase the overall protection from financial risk in China, the Government should increase central government transfers to NCMS and URBMI enrollees in poor regions and increase the total amount of government subsidies to NCMS. In addition, China should improve the efficiency and quality of health insurance by further reforming the payment system.

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