BMJ China Collection: Enhancing Financial Protection under China's Social Health Insurance to Achieve Universal Health Coverage

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Enhancing Financial Protection under China's Social Health Insurance to Achieve Universal Health Coverage

Key Messages:

- China has achieved universal population health coverage, which has significantly improved health service access and utilization; but out-of-pocket payments remain high, particularly for those with low income.
- Financial protection should be enhanced for the poor and vulnerable, as they are more likely to have catastrophic health expenses.
- A health safety net program for the poor and other vulnerable populations within the current health insurance system is particularly needed in China.

Key Words: Universal Health Coverage; Financial Protection; China

1. Introduction

Universal Health Coverage (UHC) means "all individuals and communities should receive the quality health services they need without suffering financial hardship".[1] UHC involves three dimensions: population coverage, covering all individuals and communities; service coverage, reflecting the comprehensiveness of the services that are covered; and cost coverage, the extent of protection against the direct costs of care.[2] In 2011 China achieved UHC in terms of population coverage with more than 95% of the Chinese population covered by health insurance.[3] The universal health insurance system in China has significantly improved health service access and utilization against a background of increasing incomes and aging population.[4] The average number of outpatient visits per capita increased from 1.7 per year in 2003 to 5.9 per year in 2017, and the annual inpatient hospitalization rate also increased from 3.6% in 2003 to 17.6% in 2017.[5-7] The Chinese government has invested a significant amount of funding into the public health system, with the effect of increasing the number of health workers per 1000 people from 3.48 in 2003 to 6.47 in 2017 and the number of hospital beds per 1000 people from 2.34 in 2003 to 5.72 in 2017.[7-8] In particular, China started a comprehensive health system reform in 2009; Meng et al. 2019 in this China collection provide a detailed review.[9]

Currently, the universal health insurance system mainly consists of public insurance schemes with private supplementary insurance. The system developed from three major public insurance schemes: the urban employee basic medical insurance (UEBMI), the urban resident basic medical insurance (URBMI) and the rural new cooperative medical

scheme (RNCMS); starting in 2016, the latter two began merging to form the urban rural resident basic medical insurance (URRBMI). To improve risk protection, these schemes were supplemented by critical illness insurance (also called catastrophic medical expenditure insurance, or *Da Bing Yi Bao*), and medical aid (*Yi Liao Jiu Zhu*), all of which are mainly publicly funded.

Sustainable Development Goal (SDG) 3.8 in 2016 commits countries to "achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all" by 2030 with two specific goals: SDGs 3.8.1: essential health service coverage and SDGs 3.8.2: financial protection.[10] A 2017 report by WHO and International Bank for Reconstruction and Development/The World Bank (WB) showed that China had a fairly high score for essential health service coverage, but a rather low score in financial protection.[11] The objective of this paper is to review progress to date in enhancing financial protection of social health insurance and to identify the main gaps that need to be addressed for China to fully achieve UHC and SDG 3.8.2.

2. Financial protection is relatively weak, resulting in high out-of-pocket expenses and catastrophic health expenses

The expansion of health insurance coverage reduced the out-of-pocket share of total health expenditure in China.[12] Figure 1 shows that in China the proportion of out-of-pocket expenses in total health expenditures decreased from 56% in 2003 to 29% in

2017. People had better access to quality services, technology, and medicine, and lower probability of not receiving needed care.

(Figure 1 Here)

Figure 1: Level and share of out-of-pocket expenses as a proportion in total health expenditures, 2003-2017

However, the absolute level of out-of-pocket expenses increased from CNY 414 per capita in 2003 to CNY 1089 (all monetary values reported in CNY in this study are real 2017 values after adjusting for price changes using the consumer price index.) in 2017.[13] Accordingly, household spending on health as a percentage of total household consumption expenditures also increased in both urban and rural areas, as shown in Figure 2.

(Figure 2 Here)

Figure 2: Out-of-pocket health expenditures as a proportion of total household consumption expenditures, 2003-2017

Although population coverage of health insurance increased over this period, financial protection measured by catastrophic health expenses did not significantly improve. The national health survey data showed that population coverage by the three major public insurance schemes increased from 29.7% in 2003 to 95.7% in 2011. However, the incidence rates of catastrophic health expenses (CHE) in the total population were 12.2% in 2003, 14.0% in 2008, and 12.9% in 2011.[6] CHE was often

defined as spending 40% or more of household non-food consumption expenditures on health care. Official statistics for CHE at the national level after 2011 have not yet been reported, but selected studies show that the incidence of CHE at the regional level and for specific population groups has not appeared to decline since 2011. Please see Table 1. A universal health insurance system aims to prevent financial hardship, especially for the poor, but financial protection in China does not appear to have improved significantly even after the health system reforms in 2009.

Table 1: The incidence rates of catastrophic health expenses between 2003 and 2016

Data Year	Region	Selected Population	Incidence Rate of CHE			Reference
			Poorest	Average	Richest	
2003	National	N/A	N/A	12.2%	N/A	Meng et al. 2012[6]
2008	National	N/A	N/A	14.0%	N/A	Meng et al. 2012[6]
2011	National	N/A	N/A	12.9%	N/A	Meng et al. 2012[6]
2013	Shaanxi Province	N/A	22.4%	15.8%	12.9%	Xu et al. 2015[14]

2014	Inner Mongolia	Rural	N/A	17.5%	N/A	Sun et al. 2015[15]
2014	National	Rural	31.6%	15.8%	5.7%	Wang 2016[16]
2015	National	>=45 Years Old	N/A	16.5%	N/A	Xu and Chu 2018[17]
2016	Shandong Province	Type II Diabetes	17.1%	13.8%	9.3%	Jing et al. 2018[18]

The poorest is quintile 1 of household income distributions.

The richest is quintile 5 of household income distributions.

Jing et al. 2018[18] reported the lowest 25% (25th percentile) and highest 25% (75th percentile).

3. Why was improvement in financial protection limited?

There are three main reasons for the limited improvement of financial protection in China. First, the official cost-sharing rate for covered services does not tell the whole story, especially when patients can self-refer to any provider, seeking quality care. Total out-of-pocket spending includes the deductible, co-payments for covered services, and self-payment for uncovered services. Total out-of-pocket spending as a percentage of total health expenditures—what might be called the "real coinsurance rate"--is still high, in particular for people covered by urban rural resident basic medical insurance. Table

2 shows the real coinsurance rates for the three basic medical insurance schemes. Although the cost-sharing rate decreased from 2003 to 2016, it was still 43% nationally in 2016.[19] High out-of-pocket expenses for inpatient care were the major reason for catastrophic health expenses in China.[20] The out-of-pocket expenditures per admission for the population covered by RNCMS and URBMI were CNY 3309 and 4644 in 2013 respectively, which represented 33% and 30% of disposable incomes.[21]

Table 2: Out-of-pocket spending as a percentage of total health expenditures: "real coinsurance rates"

Year	Real Coinsurance Rate (%)		
	UEBMI	URBMI	RNCMS
2003	46.5	-	93.1
2008	36.8	50.7	73.4
2013	31.2	46.4	49.9
2016	43*		

UEMBI: Urban employee basic medical insurance
URBMI: Urban resident basic medical insurance
RNCMS: Rural new cooperative medical scheme
"Real coinsurance rate": the total out-of-pocket spending including deductible, co-payments for covered services, and self-payment for uncovered services as a percentage of total health expenditures.
* The national average.
Data source: Center for Health Statistics and Information, National Health and Family Planning Commission 2015; National Health and Family Planning Commission 2017.

The poor have limited capacity to pay for health services through out-of-pocket payments. The disposable income per capita for the lowest income households (e.g. the lowest 20%) is so low compared to the high medical expenses of hospitalization that they are likely to incur catastrophic health expenses (National Bureau of Statistics 2014, 2018). Table 1 also shows that the incidence rates of CHE for the poorest (quintile 1) were much higher than for the richest (quintile 5). In addition, according to an analysis

report from the National Health and Family Planning Commission, low-income groups had higher morbidity, higher prevalence of chronic diseases, and lower self-reported health scores than the national average**,** and the real coinsurance rate of inpatient care in 2013 for low income people was 48.0%, even higher than the national average rate of 45%.[21] Among those needing hospitalization, 22.4% were not admitted, with unaffordability cited most often as the reason.

Second, critical illness insurance was not designed to target the poor, and the medical aid program is relatively small. Critical illness insurance was launched in 2015 to provide extra reimbursement and no benefit ceiling for those whose out-of-pocket expenses were more than the average disposable income per capita in the local area. The average real coinsurance rate for basic medical insurance was reduced by about 10% after the introduction of critical illness insurance.[22] However, the results from a pilot study did not show a significant reduction in catastrophic health expenses.[23] While critical illness insurance reduced the coinsurance rates for people with high medical expenses, it was not linked to real households' disposable incomes. In other words, critical illness insurance reduced the real coinsurance rate for everybody, which should disproportionately benefit the poor; but the extra financial protection for the poor was minimal without a particular focus on them. Medical aid in China aims to provide assistance to the poor, paying for an individual's medical insurance premium and reducing out-of-pocket expenses after reimbursements of basic medical insurance and critical illness insurance. Medical aid provides extra financial protection to the extremely poor people in urban areas (*Di Bao Hu*, similar to below poverty level) and

5 types of rural people (*Wu Bao Hu*, people enjoying the five guarantees, i.e childless and infirm old persons who are guaranteed food, clothing, medical care, housing and burial expenses). Funding was mainly from governments, welfare lotteries, and social donations.[24] The central government announced the general guidelines for medical aid, and the local governments (often counties) made specific implementation policies. In 2017, 35.2 million people (2.5% of the national population) received CNY 757 (about 12% of average inpatient spending per admission in 2017) for covering out-of-pocket expenses.[7] However, medical aid in China was relatively small, as it only accounted for a very small proportion of those suffering from catastrophic health expenses (12.9-17.5% of the total population in 2011-2016), and often still imposed benefit ceilings (or caps).

Third, there were considerable inefficiencies in the Chinese health care system. The primary care system in China was relatively weak, so people often self-referred to secondary and tertiary hospitals for outpatient care instead of primary care facilities. Hospital services were more costly and incur higher cost-sharing rates, which raised patients' out-of-pocket payments and contributed to catastrophic health expenses. Health insurance programs still predominantly paid providers through fee-for-service, and there were limited incentives to reward value and quality. Outpatient costs per visit increased from CNY 108.2 to CNY 176.9 and inpatient costs per admission increased from CNY 3910.7 in 2003 to CNY 6118.2 in 2017.[7,8]

Increased public funding has improved risk protection overall, but using this approach to reduce cost-sharing rates for the overall population is fiscally infeasible.

The government already heavily subsidizes urban rural resident basic medical insurance, with only 10-20% of total premium contributions coming from individuals. Even if subsidies increased each year, they would not be sufficient to address CHE among those most vulnerable. Moreover, asking beneficiaries to contribute more insurance premiums is also not financially feasible, given that those covered by the urban rural resident basic medical insurance are mainly farmers and non-employed urban residents with relatively low incomes. Accordingly, we argue for a targeted approach that assures financial protection for the most vulnerable populations, including those with the lowest disposable income, such as the lowest 20% of households, through risk pooling and redistribution.

4. Recommendations

While decreasing the gaps between insurance schemes and reducing out-of-pocket payments nationally should be a long-term goal, a substantial decrease in cost-sharing for all 1.3 billion Chinese is not likely to be financially feasible in the near future. The out-of-pocket share of total health expenditure is projected to be 25% of total health expenditure by 2030,[25] an amount in absolute value that would still leave the vulnerable population Chinese with catastrophic health expenses. Furthermore, protection of the poor from healthcare costs should be regarded as an important element of poverty alleviation in China, to break the vicious cycle of illness-induced poverty. Therefore, in order to improve financial protection and reduce catastrophic health expenses, a targeted program to create a health safety net program for the poor

vulnerable within the current universal health insurance system is needed in China.

1) The health safety net program for the poor should be administered by a single national agency, the National Bureau of Health Insurance, with a clear and consistent policy including basic medical insurance, critical illness insurance, and medical aid. This health safety net program should be jointly funded by the central government and provincial governments, supplemented by welfare lotteries and social donations. Fund contributions from national and provincial governments should depend on provincial economic status, with higher contribution proportions from the national government in less developed provinces.

2) Critical illness insurance and medical aid should be expanded and adjusted to provide more financial protection to all low-income households. Critical illness insurance should be expanded to the entire population instead of only those covered by urban rural resident basic medical insurance. A significant number of people with urban employee basic medical insurance still suffer from catastrophic health expenses, particularly retirees. The benefit eligibility for critical illness insurance (or a new subprogram only for poor people) could be revised so that it is linked to individual household disposable income instead of an absolute threshold (currently it is the average household disposable income per capita in the local area). The coinsurance rate of critical illness insurance (currently 50%) could also be decreased significantly. Medical aid should be expanded to cover all those who still incur catastrophic health expenses after critical illness insurance and could apply maximum out-of-pocket expenses (OOP ceilings) to extremely poor people, determined through strict eligibility

criteria based on household disposable income, fixed assets, financial assets, real estate, etc. Incurring some administrative costs for applying such eligibility criteria would be justified by enhanced financial protection for those most vulnerable.

3) Policy measures to improve health system efficiency and avoid overutilization are just as important as measures to improve financial protection. Simply pumping more government funding into the health sector will not guarantee UHC unless there are mechanisms to encourage cost control and better value for money. This will mean that in addition to protecting against catastrophic health expenses, the targeted safety net programs should incentivize use of primary care, with adequately trained GPs,[26] and be directed at cost-effective services; this may also mean more widespread use of health technology assessment to inform the benefit package. It is also important to design a well-aligned provider payment system to provide a value-based benefit package for the safety net program.

5. Conclusions

China's great achievement of universal social insurance population coverage has improved health service access and reduced overall out-of-pocket spending. Although the Chinese government tried to provide more financial protection to people with critical illness insurance and medical aid, catastrophic health expenses for the poor were still high. In order to achieve SDG 3.8.2 by 2030, special attention is needed to protect the poor. Current social insurance policies should be expanded. To achieve health-

related poverty alleviation, China needs a health safety net program within the current universal health insurance system, together with measures to improve health system efficiency.

Figure Legends:

Figure 1: Level and share of out-of-pocket expenses as a proportion in total health expenditures, 2003-2017

Figure 2: Out-of-pocket health expenditures as a proportion of total household consumption expenditures, 2003-2017

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Competing Interests:

The authors declared no competing interests.

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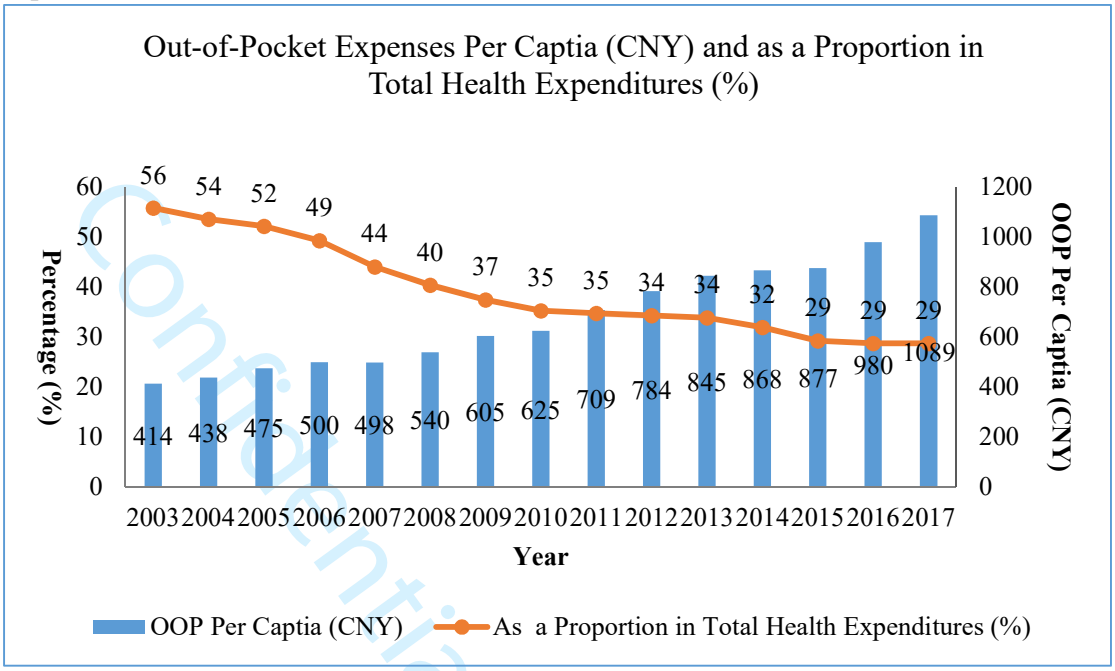
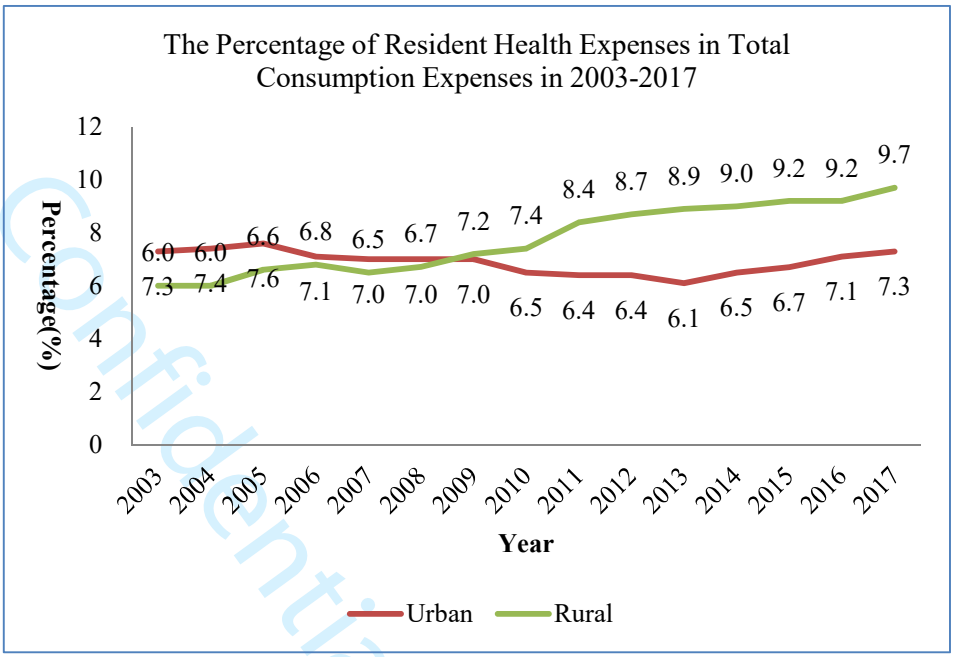
Figure 1: Level and share of out-of-pocket expenses as a proportion in total health expenditures, 2003-2017



Data source: National Health Commission 2018

Figure 2: Out-of-pocket health expenditures as a proportion of total household consumption expenditures, 2003-2017



Data source: National Health Commission 2018