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Health System Reform: Experiences and Lessons from China

Key Points

- China has implemented a comprehensive health system reform over the past decade, covering priorities in strengthening capacity of primary care, extending and enhancing social health insurance coverage, equalizing provision of basic public health services across the country, reforming the public hospital sector, and improving medicines policies.

- Both central and local governments have mobilized significant political and financial resources for supporting implementation of the reform policies. Almost everyone has been covered by social health insurance system and basic public health service package. Unmet health needs have reduced and disparity of selected health indicator has narrowed.

- Some of the challenges still persist and new challenges are emerging. Quality of care provided by primary care providers is not significantly better; cost of medical care is still escalated; inefficiency in use of health resources is prevalent, and health care delivery and financing systems are fragmented.

- Building a primary-care-centered and integrated health system with a health-outcome based evaluation system is the key for future health system development.

1. Introduction

In March 2009, the Central Committee of the Communist Party of China and the State Council issued Opinions on Deepening Health System Reform (Central Committee of the Communist Party of China, State Council, 2009). The reform is a response from the government to the growing concerns about financial risks of diseases, quality of care, inequalities of health and health care, and conflicts between health providers and patients. The aim of the reform is to establish an equitable and effective health system for all people (universal health coverage) by 2020 through strengthening of systems for health care delivery, health security, and essential medicines.

China’s health system reform over the past decade is a large-scale and long-term social experiment from which many experiences and lessons can be synthesized for the future and other nations. Evidence-based analysis of the reform is critical for thinking about what might be options for continuing the changes after this round of reform that will finish in 2020. The purpose of this article is to introduce the major reform strategies, analyze their achievements and challenges, and provide recommendations.

2. Design and implementation of the reform strategies and policies

The reform mainly covers five areas even though the policy priorities in the five areas vary in different years. Table 1 presents summary of the major reform strategies and policies.

The reform policies were designed to address the basic issues of access and financial protection. Financing reforms focus on expansions of population coverage and benefit packages of the social health insurance schemes. Reforms of health care delivery
focus on removing drug markups as a source of financing for health providers to encourage provision of cost effective services, strengthening capacity of primary health providers, and changing behavior of public hospitals to encourage efficient use of health resources. A mechanism for equalizing the government subsidy for delivering defined packages of public health programs has been established to improve access to public health care.

Table 1: Summary of the major reform policies, 2009-2018

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<thead>
<tr>
<th>The five reform areas</th>
<th>Major reform policies</th>
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<tbody>
<tr>
<td>Social health security system</td>
<td>• Expanding and sustaining population coverage of the social health insurance system</td>
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<td></td>
<td>• Extending service package of the social health insurance system</td>
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<td>• Introducing a critical illness insurance</td>
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<td>• Integrating the rural and urban resident basic medical insurance system</td>
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<td>Essential medicines system</td>
<td>• Removing drug markups as a source of financing for health providers</td>
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<td>• Formulating a national essential medicines list and reforming the drug procurement system</td>
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<td></td>
<td>• Promoting rational utilization of antibiotics</td>
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<tr>
<td>Primary health care system</td>
<td>• Increasing investment in the primary care system</td>
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<td></td>
<td>• Mobilizing human resources for primary care by improving incentive mechanisms for primary health providers</td>
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<td></td>
<td>• Extending capacity for educating and training general practitioners</td>
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<td></td>
<td>• Establishing a tiered service delivery system</td>
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<tr>
<td></td>
<td>• Removing drug markups as a source of financing</td>
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<tr>
<td>Basic public health package</td>
<td>• Equalizing provision of basic public health service package to all people</td>
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<td></td>
<td>• Supporting programs for controlling the major public health problems</td>
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<td>Public hospital sector reform</td>
<td>• Replacing fee-for-service by an alternative payment system</td>
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<td></td>
<td>• Improving pricing policies and removing drug markups as a source of finance</td>
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<td>• Encouraging the establishment of consortia or alliances of health care providers</td>
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Source: compiled by the authors based on the reform documents

The State Council sets up a State Council Health System Reform Office. This office has two main responsibilities. The first is to coordinate line ministries to develop specific reform policies, for example hospital payment reforms and remuneration policies for primary health workers. The second is to develop annual work plans to guide implementation of the reform activities by line ministries and provincial governments. Provincial governments develop their annual work plans with guidelines from the central government. Municipal cities and counties in each of the provinces develop their implementation plans following the guidelines from the provincial government and carry out the reform activities. The State Council Health System Reform Office evaluates performance of related ministries at central government and each of the provincial governments at end of the year. The performance evaluation is associated with promotion of the political leaders and allocation of government subsidies from the upper level governments to the local governments. Besides financial investment, strong political support has been crucial.
for implementing the reform activities.

3. Achievements and challenges

We select government health expenditure as the reform input, and health care utilization and disparities in the maternal mortality rate as the health output and outcome, for examining the reform progress. Maternal mortality can serve as a lens through which problems in hospital quality of care can be identified. Challenges are analyzed from the aspects of quality, efficiency and integrated care.

*Increased government financial accountability for health and universal population coverage of social health insurance schemes*

Health system reform requires additional investments. Figure 1 shows trends in government health expenditure between 2000 and 2017. Between 2000 and 2006, government health expenditure increased by CNY 10-20 billion every year (1 US$=6.71 CNY at present). Between 2009 and 2017, government health expenditure increased by CNY 100-150 billion every year. The share of government health expenditure in total health expenditure also increased. For the first three years of the reform, the central government promised that in addition to the regular health budget, an additional budget of CNY 850 billion is allocated to support the reform activities (State Council, 2009).

![Figure 1](https://mc.manuscriptcentral.com/bmj)

**Figure 1:** Government health expenditure, 2000-2017
(Data source: Chinese Health Statistical Yearbook 2018)

The government targets the low-income provinces and counties for allocating the additional health subsidies. In low-income counties, 80% of the fund for the rural health insurance scheme came from government subsidies, half from the central and half from provincial governments; and 100% of the funds for the basic public health programs came from the upper level governments.

During the time period, population coverage of social health insurance schemes, including the rural medical insurance (the new rural cooperative medical scheme), the urban resident basic medical insurance and urban employee basic medical insurance, have been extended to everyone (please see more details in Fang Hai’s paper in this Collection). In the meantime, with the basic public health service package policy, everyone is covered by the basic public health programs (please see more details in Yuan Beibei’s paper in this Collection). The continued financial support from the government is the key to the universal coverage of social health insurance schemes and public health programs.

*Improved access to health care and decreased disparities in health status*

Before introduction of the social health insurance schemes, a large proportion of people did not use health care despite perceived health needs, mainly because of the financial barrier. In 2003 and 2008, of patients who were advised by doctors to be
hospitalized, 29.6% and 25.1% did not use inpatient care, mainly due to cost (Center for Health Statistics and Information, 2013). In 2013, the proportion of patients with unmet inpatient care needs fell to 17.1% (Center for Health Statistics and Information, 2013). Figure 2 shows the health care utilization. Extended coverage of social health insurance schemes and increased availability of health care are the main reasons for reduced costs in accessing health care (Meng et al. 2012).

Figure 2 is about here

**Figure 2:** Health care utilization by per capita outpatient visit and hospitalization rate
(Data source: Chinese Health Statistical Yearbook 2018)

To narrow health disparities is a reform target. China has achieved good performance in health improvement. Figure 3 shows trends in maternal mortality by provincial income, and shows that maternal mortality rates converged across all provinces. Gaps in the infant mortality rate between rural and urban areas also narrowed. In 2000, the infant mortality rate gap was 25.2‰ (37‰ in rural areas vs 11.8‰ in urban); and in 2017, the gap had reduced to 3.8‰ (7.9‰ in rural areas vs 4.1‰ in urban) (National Health Commission, 2018). Support by social health insurance schemes for institutional childbirth delivery which targeted low-income areas was critical for reducing the gap in maternal and child health (An L et al., 2015).

Figure 3 is about here

**Figure 3:** Maternal mortality rate by income level of provinces
(Data source: Chinese Health Statistical Yearbook 2018)

**Challenges**

The health system in China is more complex than that in many other countries due to its population size and regional diversity. While China has achieved good progress in its health system reform, challenges still persist or are emerging.

**Poor health care quality provided by primary care providers.** Patients prefer to seek health care in hospitals at county level and above, mainly due to low quality health providers at primary care facilities (village clinics and township health centers in rural areas, and community health stations and centers in cities). In 2010, 5.6% of the doctors in township health centers had received formal medical education (ie five years of medical education) (Ministry of Health, 2011); this increased to only 10% in 2017 (National Health Commission, 2018), very inadequate progress. From 2005 to 2015, the proportion of health care services provided by primary care providers decreased by 7% (Zhang et al. 2017). Incentive for attracting and retaining more qualified health professionals in the primary care system is the key issue (please see more details in Ma Xiaochen’s paper in this Collection).

**Cost escalation of medical care and inefficient use of resources.** The growth rate of medical costs has increased since 2009. In general hospitals, medical expenditure per discharged patient increased by CNY 800 RMB between 2005 and 2008 (from CNY 4,662 in 2005 to CNY 5,464 in 2008) (Ministry of Health, 2011), and by CNY 1,440
between 2010 and 2013 (from CNY 6,526 to CNY 7,968 in 2013 (National Health Commission, 2018). The proportion of out-of-pocket (OOP) payment for health care declined, but the financial burden from using health care did not significantly fall, especially for low-income households (please see more details in Fang Hai’s paper in this Collection). Even though drug cost in total hospital expenditures has fallen (please see more details in Xu Jin’s paper in this Collection), the overall hospital expenditure still escalates.

Moral hazard on both health care providers and users when health insurance coverage is universal and the fee-for-service payment system are the key sources driving over-provisions of health care which means waste of health resources (Liu H, 2015). Over and unnecessary care would reduce efficiency in use of the resources for better health. Figure 4 shows China’s rank in the world by per capita health expenditure (input), under five mortality rate (U5MR) and life expectancy (outcome), indicating a trend of declining relative efficiency in China’s health system. The government subsidies are allocated mainly based on service volume and activities, not health outcomes, which is part of the reasons for increasing over and unnecessary provisions of health care.

**Figure 4** is about here

**Figure 4:** China’s ranks in the world by per capita health expenditure, U5MR and life expectancy
(Data source: World Development Indicators, World Bank, 2018)

**Fragmented health care delivery and financing systems.** To control non-communicable diseases effectively, health services should be people-centered, integrated, cost effective, and ensure continuity of care. Most of the health institutions are driven by self-interests and lack motivations to cooperate with others. Even though medical consortia and alliances are encouraged by government, mechanisms for coordinating health institutions to provide continuing care are not established. The fragmented financing system, with separate financing for different health programs and population groups is one of the causes of fragmented health care providers (Meng et al. 2015). The current administrative structure, for example, administration of different types and levels of health providers by different departments in the National Commission for Health, could be a source of lack of coordination and connection between health providers. Indeed, it can lead to competition for power and resources. In addition, information technology is not effectively used for connecting health providers and services.

4. Recommendations

**Building a primary-care-centered and integrated health system.** The current hospital-centered health system should be transformed to a primary-care-centered system, where health providers are closely connected and coordinated to offer continuing and integrated care. Both organizational and functional structures of health care institutions should be redesigned and radically changed. People should be able to receive good quality and convenient health care from nearby health providers. Integration of health services and a three-tiered structure of primary, secondary and
tertiary providers should be developed with primary care as the foundation. Government efforts including financial policies and professional development opportunities must make the primary care system more attractive for qualified health professionals.

**Consolidating the health financing system.** Strategies for universal health coverage can provide the future direction for integrating sources of finance for both medical care and preventive care. The current separate financing mechanisms where health insurance schemes cover clinical care and basic public health service package cover preventive care, can be integrated to encourage hospitals and clinics to provide preventive services. When rural and urban health insurance schemes are integrated, pro-poor policies mechanisms should ensure protection of the low-income people. For urban-employee based medical insurance, it needs to combine the employer/employee contributions and government subsidy to provide integrated care which helps ensure people stay out of hospital.

**Establishing a health-outcome-based monitoring and evaluation system.** The government should recognize the importance of establishing a more effective performance evaluation system. The existing evaluation system where performance is mainly measured by service-volume and activities should be transformed to a system in which quality of care and health outcomes receive greater weight. The health information system including information collection and analysis should be improved to enable better monitoring and evaluation. Key health outcome indicators should be included in evaluating government’s performance. Most importantly, health impact assessment is needed to encourage healthy China strategies.

**5. Conclusion**

China’s health system reform has made good progress. However, some challenges persist and new challenges are emerging. To establish a primary-care-centered and integrated health system is the key to providing people with good quality care at reasonable cost. Future reforms not only require financial investment, but more importantly, demand that vested interests be addressed.

**References**


An L, Li H, Yin K. Impact of NCMS and subsidies on maternal and child health care. Chinese


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(Data source: Chinese Health Statistical Yearbook 2018)
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