**10 years of China's comprehensive health reform: a systems perspective**

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# Introduction

As the world signed up to the Sustainable Development Goals by 2030 and reaffirmed health as a fundamental human right, universal health coverage (UHC) has become a shared collective task (Astana Declaration on Primary Health Care 2018). The challenge involved is daunting: more than half of the world's population do not have full coverage of essential health services; around 100 million people experience extreme poverty because of the need to pay for health care; and as many as 800 million allocate more than 10% of household disposable income to buy medicines and health services (World Health Organisation & World Bank, 2017).

China has the largest population in the world, with 1.4 billion people living in very diverse geographical and socio-economic contexts. The efforts, progress and challenges of UHC in China not only directly contribute to improving health conditions of a large proportion of the world's population, but also provide potentially valuable lessons that can help inspire action on a large scale. This year (2019) marks the 10th anniversary of China's comprehensive health system reform launched in 2009, which aimed at "establishing a basic health care system covering all the population by 2020" (ref Central Committee, State Council 2009). *Health Policy and Planning* (HPP) has been following the Chinese reform from the very beginning and published a number of research articles related to the reform. These are brought together in this volume to provide an overview of experiences and lessons learned. To introduce and highlight these papers, we structure them here by four themes.

## China's journey towards universal health coverage in a global perspective

The paper of Tediosi, Finch, Procacci, and Marten (2015) places China's movement towards UHC in an international perspective. They analyzed the role of the BRICS countries, i.e. Brazil, Russia, India, China and South Africa, in promoting UHC globally. They found that these countries did not and were not likely to act collectively to push for UHC; China, Brazil and South Africa were individually engaged actively in promoting the agenda. China's influence was rooted in its sheer economic size. Since the paper was published, China has made concrete progress in moving ahead the multinational Belt and Road initiative, including setting up the Asian Infrastructure Investment Bank in 2016, the brand-new China International Development Cooperation Agency in 2018, and the proposed health-specific international agenda called the Healthy Silk Road initiative in 2018. Such multi-sectoral development initiatives are potentially important contributors towards achieving UHC.

## Financing

One of the central international themes in developing UHC involves expanding risk pooling. Several papers in HPP have focused on this topic.

Zhang and Liu (2014) projected the ratio of out-of-pocket payment (OOP) to total health expenditure (THE) and the ratio of OOP to disposable personal income (DPI) from 2009 to 2011. They noted that the OOP/THE ratio might move in a direction different from the OOP/DPI ratio. Their projections match reality for 2009 and beyond. Their findings highlight the importance of the central government's share of total health expenditure, cost containment, as well as increasing affordability at household level.

Their arguments were supported by the study by Yang and Wu (2015), which evaluated the impacts of the rural New Cooperative Medical Scheme (NCMS) using data from an individual-level longitudinal survey from 2004 to 2009. They found that the scheme had little effect on reducing OOP payment because of cost escalation, which was higher in primary care facilities than hospitals.

Shan et al. (2018) studied satisfaction of key stakeholders (hospital professionals, health and social security agency administrators) with the merger of the three social health insurance schemes (Urban Employees Basic Medical Insurance, Urban Residents Basic Medical Insurance and the NCMS) in Chongqing, a megacity in western China. Almost half of respondents were dissatisfied with the integration reforms. This was associated with lack of success in improving the fund management system, reducing inequities and expanding benefit packages.

Two papers explored further widening of health system reforms in China to respond better to the health needs and demands of its population. W. Xu, Sheiman, van de Ven, and Zhang (2011) drew lessons from Russia to discuss challenges in regulated competition. The paper highlighted the lack of competition (choice), higher costs in the private sector, and government regulation, as barriers to effective competition. Yang, Jingwei He, Fang, and Mossialos (2016) evaluated three pilot insurance models for institutional long-term care (LTC), including a Social Health Insurance model in Shanghai, a LTC Nursing Insurance (LTCNI) model in Qingdao and a means-tested model in Nanjing. This systematic narrative review supplemented by stakeholder interviews suggested that the LTCNI model would be by far the most desirable policy option among the three studied, but its narrow definition of eligibility excluded a large proportion of needy elderly from accessing care, which needs addressing in future reforms.

## Service delivery

Barber, Borowitz, Bekedam, and Ma (2014) discussed the future of public hospitals in China based on analysis of domestic policies as well as experiences in industrialized countries. They argued that the focus of hospital development and reform in the future is likely to be at county level, with emphasis on control of cost and quality. They stressed that there would be major challenges involved in further hospital reform, including resistance from interest groups, generating and allocating effectively additional financial resources, engaging health professionals in using evidence-based clinical guidelines, and improving hospital management, monitoring and evaluation.

Tang, Zhang, Chen, and Lin (2014) analyzed the growth of private hospitals and their changing characteristics between 1990 and 2009. They found a rapid increase in the number of private hospitals after 2001, and an age structure of private hospital physicians that was much less balanced than in public hospitals. Private hospitals had a much larger proportion of physicians aged under 30 or above 60, suggesting that even though policies made it easier to open private hospitals after the early 2000s, the growth of private hospitals was still held back by the special tie of physicians with public hospitals.

Two studies looked at trust in health care providers in China. Duckett, Hunt, Munro, and Sutton (2016) found in a nationally representative household survey that trust in hospitals was high while trust in clinics/ primary care facilities was low, and was strongly associated with increased use of hospital services for minor health problems. Wu, Lam, Lam, Zhou, and Sun (2017) found in a mixed-method study of both patients and providers in Hangzhou, a big and rich city in eastern China, that doctors tended to agree that patients preferred hospital services over primary care.

Wu's study also touched on the professional norms of medical service provision. The interviewed doctors predominantly thought they put patients' interests before anything else in their work, but more than a third said they also needed to consider how to generate profit for their hospitals. However, doctors felt guilty for having to generate income for themselves and their institutions through patient care, and more than a half of them admitted they gave preferential treatment to patients introduced by acquaintances.

Song, Ma, Zhang, Yuan, and Meng (2018) studied all counties from 2008 to 2014 and found that health professionals per 1000 population had been increasing continuously following the start of the 2009 reform. However, growth had been more rapid in non-poor counties, producing greater inequality in access to human resources. Similarly, Elwell-Sutton et al. (2013) found inequality in non-communicable-disease service utilization, with non-needs factors contributing to this. Wu’s paper suggested that patients with a stronger social network were likely to get more attention from doctors. Hence, the current health system was regressive, benefiting more those of higher socio-economic status, and thus reinforcing inequity (Wu et al., 2017).

Two other papers looked at currently topical service provision issues. The analysis by Penm et al. (2014) suggested that clinical pharmacy services have significant potential for improving cost-efficiency and quality of hospital services. Liang, Mays, and Hwang (2018) reviewed progress in integrating mental health services into the health system and particularly into primary care facilities. They concluded that although there had been only limited progress, integration offered great promise in improving access to and quality of mental health services. They identified a number of challenges facing integration such as limited human and financial resources for mental health, concentration of services in hospitals, inter-professional barriers in integrating mental and physical health services, and social discrimination and stigma against people with mental disorders.

## Governance

Brixi, Mu, Targa, and Hipgrave (2013) analyzed the degree of health inequity and the importance of engaging sub-national governments in addressing health equity, particularly in financing and monitoring. The analysis suggested that sub-national government expenditure on health accounted for 90% of total government expenditure on health and had been increasingly regressive across and within provinces. They concluded that more effective governance is needed to align the responsibility and capacity of sub-national governments with national policies to ensure local implementation of the national agenda of health equity.

Ramesh, Wu, and He (2014) analyzed the changes in the structure of health system governance in China since the 1980s and their effects. They highlighted the importance of going beyond micro-level provider incentives and looking at the regulatory institutions of providers. The weak accountability system had allowed providers to dominate other key stakeholders (government and users) since the 1980s. The increasing role of insurance was likely to rebalance power of key stakeholders.

Hongqiao Fu, Li, Li, Yang, and Hsiao (2017) evaluated the impact of comprehensive reform in Sanming, a poor city in the coastal province of Fujian. They identified some short-term gains in improved performance of local public hospitals relative to hospitals in other cities in Fujian, highlighting the importance of aligning governance structure, payment system and physician remuneration methods.

# Key lessons for universal health coverage in China and elsewhere

Papers in this volume demonstrate that health reform in China has made commendable progress and demonstrated the feasibility of systemic health system reform in diverse settings at an exceptionally large scale. On the other hand, the articles also reveal some deep challenges. Both achievements and challenges have consequences for the global UHC movement.

In terms of financing, high population coverage has been achieved through rapid injection of government finance into social health insurance to cover rural and urban residents. China has substantially reduced OOP as a proportion of THE from 60% in 2000, to 40% in 2008, and to 28% in 2016, and will further reduce OOP/THE to 25% by2030 as current projection suggests (China National Health Development Research Center, 2016). However, OOP as a proportion of DPI has increased (China National Biureau of Statistics, 2009-2018). Additional government funding, from both central and subnational governments, is needed to reduce OOP and inequality in health services access, such as for non-communicable diseases. It seems likely also that these insurance schemes will be useful starting points to develop and extend services to address the changing needs of China's population, such as mental health and long-term care.

Regarding service delivery, it is important to strengthen primary care, as hospital dominance is a systemic problem affecting the efficiency of the health system (Sylvia et al., 2017; J. Xu & Mills, 2017), the accessibility of services which need to be sensitive to local population needs (e.g. mental health services), as well as the equity of health services access particularly for non-communicable diseases. Primary care faces challenges in financing, quality, as well as low patient trust. In addition, a major challenge facing service delivery is the perverse provider incentives that have become embedded in clinical practice (Yip, Hsiao, Meng, Chen, & Sun, 2010). Important progress has been made since the publication of these papers, including the removal of drug price markups (H. Fu, Li, & Yip, 2018; Yi, Miller, Zhang, Li, & Rozelle, 2015; Zhuang et al., 2017). However, some deeply rooted provider incentives towards revenue generation have remained unchanged, and are likely to restrict the effectiveness of potentially useful approaches such as strengthened role of clinical pharmacy suggested by Penm et al. (2014).

There has been clear government commitment to expanded insurance coverage, as well as to a greater government role through insurance funds regulation and management. This is likely to contribute to stronger health system governance. However, public finance is yet to be effectively integrated across insurance schemes and levels of government to maximize the value that can be obtained from insurance. Furthermore, the goals of improved health outcomes, health equity and financial protection have not yet been fully institutionalized. More effective evaluation and monitoring, as well as community empowerment in ensuring accountability and responsiveness, is needed to make progress towards a people-centred health system that places health needs and equity at the center of health services.

Future reform should adopt the lens of systems thinking. As the collection suggests, the outcome of insurance schemes is dependent on the delivery system that in turn is affected by financial incentives, professional norms of medical practice as well as the effective engagement of patients and population. The effectiveness of financial and service-delivery policy arrangements is facilitated or enabled by their institutional framework. Coordinated reform of governance, financing, as well as service delivery is a critical challenge that China and similar countries need to address. Integration of insurance funds as strategic purchasers is an important step, among many others (Meng, Fang, Liu, Yuan, & Xu, 2015; Yip et al., 2010). Such strengthened purchasers need to channel resources particularly towards a stronger primary care where patients and communities play an active role, in order to address the comprehensive needs of people in an integrated approach.

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