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Universal Health Coverage

The Case of China

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prepared for the UNRISD project on
Towards Universal Social Security in Emerging Economies: Process, Institutions and Actors

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The United Nations Research Institute for Social Development (UNRISD) is an autonomous research institute within the UN system that undertakes multidisciplinary research and policy analysis on the social dimensions of contemporary development issues. Through our work we aim to ensure that social equity, inclusion and justice are central to development thinking, policy and practice.

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Acronyms

CCP	Chinese Communist Party
CMS	Cooperative Medical System
DRC	Development Research Centre of the State Council
EM	Essential medicines
EMI	Employee Medical Insurance
GDP	Gross domestic product
MOF	Ministry of Finance
MoH	Ministry of Health
NDRC	National Development and Reform Commission
NGO	non-governmental organization
RMB	Renminbi
SARS	Severe acute respiratory syndrome
SOE	state-owned enterprise
UHC	universal health coverage
UNICEF	United Nations Children's Fund
USD	United States dollars
WHO	World Health Organization

Summary

In less than a decade, China transformed its inadequate, unjust health care system in order to provide basic universal health coverage (UHC) for its people. What forces made it possible for China to achieve this? What kind of transformation took place? What are the impacts of these policy changes? What can we learn from China? Moreover, while China has achieved UHC in basic health services, this does not mean that everyone has equal access to the same quality of affordable health care.

This paper, which uses a theory of political economy to analyse China's policy changes and accomplishments, consists of four main sections. Section I reviews the historical development of the Chinese health care system from the 1950s through the 1990s, tracing the serious consequences of the policy shift in the 1980s when the health care system and health care delivery became privately financed and commercialized.

Section II analyses the political economy factors that drove and shaped the reform of the Chinese health system, focusing on the politics, institutions and actors that synergistically led to the establishment of UHC in 2009. In this section, we modified slightly John Kingdon's theory and used it to examine four main streams of forces to explain how China's reform came about. (1) The problem stream shows how Chinese political leaders recognized a serious, widespread public discontent regarding health and then diagnosed the root causes of these health problems. (2) The policy stream examines how major stakeholders in the health sector proposed, and heatedly debated, different policy options based on their vested interests and ideologies. (3) The financial stream highlights how China's health policy was driven by fiscal constraints. (4) The politics stream analyses the political factors that influenced the agenda setting and policy formulation of UHC in authoritarian China, albeit with limited political transparency. The paper tracks these streams with historical evidence to conclude that the policy changes for UHC in China were established by the convergence of these four streams.

Section III presents the policy outcomes–the current financing structure of the UHC (i.e., the three different insurance schemes, their benefit packages, and key companion programmes to assure the supply of basic services). Based on quantitative evidence, we summarize the impacts of China's UHC in terms of equitable access to health care, quality and affordability of health care, health outcomes, and financial risk protection from high and/or catastrophic medical expenses. Although China's UHC was a great achievement, stark disparities remain between urban and rural residents in China, along with high health expenditure inflation rates arising from inefficiency and waste in the health care system. In section IV, we discuss the remaining challenges for China's health care system and comment on the potential lessons of the Chinese experience for other nations.

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Introduction

Despite being a developing country with a population of 1.4 billion, China has managed to extend a basic health safety net to more than 95 per cent of its population over the past decade.[1] What forces converged to make this achievement possible? This paper analyses the political and economic drivers that led to the reforms needed to achieve universal health coverage (UHC) of primary care in China.

While nearly everyone has access to essential health care, this does not, however, mean that everyone has equal access to the same quality of affordable health care. Stark disparities between urban and rural residents continue to challenge China, along with high health expenditure and inflation rates caused by an inefficient and wasteful health care system. Nevertheless, China's policy journey can inform other nations as to what is needed to make major health system reforms possible. Guided by the political economy theory developed by John Kingdon (2011), we will illustrate that achieving UHC requires the convergence of several factors: heightened problem recognition, ideas/ideology for policy formulation, political institutions and available fiscal space. We will also demonstrate that health insurance coverage is not the same as effective health care coverage. Unlike Thailand, where the supply of basic services was built before health coverage was provided, the success of China's UHC is only partial because it is built on the simultaneous investment in, and development of, preventive and basic health services and the provision of insurance coverage for all.

The process of health reform in China began amidst the extreme poverty that existed 30 years ago. The country's previous socialist health care system had largely imploded in the early 1980s as a result of China's adoption of a market strategy that relied on private sources to finance health care and commercialize the provision of health services. Ironically, China had essentially abandoned its earlier, successful public health service, which had vastly improved the health of its people, in favour of the marketization of health care. The dramatic market failures inherent in health markets created havoc and yielded profound inequities in health.[2]

The privatization and commercialization of health care in the early 1980s left behind three deep and enduring wounds for current and future Chinese leaders to address. First, private financing resulted in disparities in access to quality health care and health status between the rich and the poor, and between urban and rural residents. China has been addressing this issue during the past decade by increasing public financing for the poor, establishing universal health insurance, and investing in health facilities in poor areas. However, China has not been able to close the access gap to any significant degree, due to its inability to close the gaps in human resources between cities and the countryside, and between poor and rich provinces.

Second, the unfettered free market strategy opened the way for all hospitals and physicians to pursue profits, particularly when prices were distorted. Profit-driven medicine has become the norm, resulting in poor quality of health care, incorrect diagnoses, inappropriate treatment, and harm caused by health interventions. Quality of care cannot be ensured.

[1] See discussion and sources in Yip et al. (2012).
[2] See discussion in Blumenthal and Hsiao (2005).

Third, profit-driven medicine has created deeply embedded waste and corruption in Chinese medical practices that have led to high inflation in health expenditures. While China's economy has grown at a phenomenal rate, health expenditures have grown even faster, partly because of profit-seeking behaviour of hospitals and physicians.

The Chinese government has conducted extensive investigations, including engaging international organizations and scholars, gathering comprehensive evidence and analysing the major health problems cited above in an effort to address the enduring negative legacies of the privatization of health care which began in the late 1970s. As a result, top Chinese officials, as well as the general public, have a comprehensive and accurate understanding of both the problems and their root causes, which are mostly attributable to the privatization and commercialization of health care. This information has formed the technical basis for designing the reform to achieve UHC.

This reform was formally announced in 2009 and aims to achieve 100 per cent social health insurance coverage through three different insurance schemes targeted at different population groups that currently enjoy inadequate benefits. The benefit package will expand as China's fiscal capacity increases, with a target to cover 70 per cent of health expenditure by 2020.

China is keenly aware that effective coverage under UHC requires that services and drugs be available to everyone. Hence, China has made huge new investments in prevention programmes and primary health care services to ensure the supply of basic services for everyone—including building physical facilities, establishing a new essential drugs purchasing and distribution system, developing a nationwide electronic information system, and training primary care physicians. Hence, Chinese UHC is a health system transformation in progress along multiple dimensions of the health care system.

This paper begins with a review of the historical development of the Chinese health care system, tracing the serious consequences of its 1980s policy shift to the privatization and commercialization of Chinese health care. Drawing on Kingdon's multiple streams theory on policy change, we next analyse the political economy factors that drove and shaped Chinese health reform as focused discussions of politics, institutions and actors synergistically lead to the establishment of UHC in 2009. We then present the current financing structure of the UHC (i.e., the three different insurance schemes, their benefit packages, and the key companion programmes designed to ensure the supply of basic services). Using quantitative evidence, we summarize the impacts of China's UHC in terms of access to health care, quality and affordability of health care, equity in access and quality, health outcomes and financial risk protection from high catastrophic medical expenses. Lastly, we conclude with a discussion of the remaining challenges for China's health care system and comments on the possibility of learning from China's experience.

Background: A Recent History of China's Health Care System: 1950–2009

After the Chinese Communist Party came to power in 1949, it created a Chinese health care system that was typical of communist states. The government (national and local) owned, funded, and ran all hospitals from small township health centres in the countryside to large, specialized hospitals in urban areas. The private practice of medicine and the private ownership of health facilities disappeared during a massive nationalization movement in the 1950s. Physicians became employees of the state. Priority was given to prevention and primary care.

In rural areas, the cornerstone of the health care system was the commune, the critical institution of political, economic, and social life. Each commune, composed of about 10,000-20,000 residents, owned the land, organized its cultivation, distributed its harvest, and provided social services, including health care, to its members through the Cooperative Medical System (CMS). The CMS operated health posts in villages which had an average of 1,000 residents while the township health centre covered all the residents of a commune. The village health post was typically staffed by practitioners who were minimally trained community health workers—so-called "barefoot doctors."[3] The township health centres typically have 10-15 beds, staffed with physician assistants. Counties, which on average have a population of 300,000, have a public county hospital with an outpatient clinic and 300 beds, staffed by medical school graduates who had three to five years of medical training. Chinese state enterprises produced low quality essential drugs inexpensively and distributed them to providers. The CMS was jointly funded by the commune, the government budget, and patients' out-of-pocket payments.

Urban residents relied on their employers—the state enterprise—to organize and finance clinics and hospitals which provided health care for workers and their family members. Each enterprise gave life tenure to its employees and was responsible for their employees' health care, pensions, housing and schools for the employees' children. These benefits were financed on a pay-as-you-go basis. Those people unaffiliated with an enterprise relied on public neighbourhood health clinics and public urban secondary hospitals for health services, financed largely by the local government. The national and provincial governments funded and operated tertiary hospitals. Prevention was funded and delivered by the government as well.

From the early 1950s to the early the 1980s, the Chinese health care system made enormous improvements in health and health care. The Chinese public health apparatus achieved major gains in controlling infectious diseases through immunization, improved sanitation, and the control of disease vectors such as mosquitoes for malaria and snails for schistosomiasis.[4] Infant mortality fell from 200 to 57 per 1,000 live births, and life expectancy increased from about 45 to 68 years.[5] These achievements were largely due to improvements in the delivery of public health and primary care.

Unfortunately, China was not able to continue this extraordinary trajectory after embarking on economic reform in 1978. Under the strong influence of neoliberalism arising in the 1980s,[6] the theory of economic reform based on privatization and marketization drastically altered four major health policies in China. It shifted public financing to private sources; it turned public hospitals and clinics into commercial, for-profit enterprises; it decentralized China's health system and it altered the price structure for public facilities, thereby enabling them to earn profits.

The first policy change involved a shift from public to private financing for health care. When China's centrally planned socialist economy changed to a market economy centred on private enterprise, the Chinese government experienced a drastic reduction in revenue. Revenue as a percentage of GDP fell from 30 per cent to 10 per cent. Consequently, by the early 1990s[7] subsidies for public health facilities fell from 50 to

[3] See discussion in Zhu et al. (1989).
[4] See Hesketh and Wei (1997).
[5] See UNDESA data, http://esa.un.org/wpp/Excel-Data/mortality.htm
[6] See Birch and Mykhnenko (2010).
[7] See Yip and Hsiao (2008).

60 per cent to merely 10 per cent of the facilities' total revenues. The government, therefore, decided to replace public financing with private sources; public health facilities would charge patients directly for services and patients would pay out-of-pocket. The existing enterprise-based health insurance programme for employees was reformed, largely protecting health care for urban workers in the formal sector. Migrant workers and urban residents working in the informal sector were left uninsured. The government completely dismantled the communes to privatize the agricultural economy, which destroyed the commune-based health care safety net for rural residents. Without the CMS, Chinese peasants lost their means of pooling risks for health care expenses, and 900 million rural, mostly poor citizens became uninsured overnight. In the meantime, the vaunted "barefoot doctors" became unemployed and were forced to become private health practitioners.

As a companion to the policy change in health care financing, the Chinese government forced public health clinics and hospitals to rely on charges to patients as their main source of income. Virtually unregulated, this policy basically turned public facilities into free, commercial enterprises. As public funding declined, public facilities relied more and more on the market to sell services to patients to cover their expenses. De facto public hospitals and clinics came to function like for-profit commercial entities, focusing primarily on their "bottom lines," with government policy informally sanctioning their actions through the legitimization of the privatization process. Clinics and hospitals quickly found that selling drugs and performing tests were the most lucrative ways to stay afloat, pay bonuses to staff, and generate funds for expansion. Thus, drug sales and test orders skyrocketed.

Another policy change involved decentralizing the public health system to local governments in order to reduce central governmental funding for local public health activities. Rich provinces had adequate financial resources to cover these costs, but poor ones did not, creating significant disparities across provinces and counties. Furthermore, the central government granted local public health agencies the authority to charge for certain services, such as inspections of hotels and restaurants for sanitary conditions and industries for environmental compliance. Public health agencies could also establish fee-for-service health centres and hospitals for delivering curative services. Predictably, local public health authorities concentrated their activities on revenue-generation and neglected preventive programmes such as health education, maternal and child health, and epidemic control.

The last major policy change involved pricing. The Chinese government wanted service prices to be affordable to patients, while also wanting public facilities to survive and flourish. With a lack of adequate understanding that an ill-designed payment system would lead to undesirable behaviour on the part of health care providers' and increased waste and inefficiency in the health system, the Chinese government promulgated an unsound pricing policy that set in motion significant changes in the organizational culture, motivation, and behaviour of hospital directors and practitioners. To be more specific, the government set prices for personal services such as physician visits or daily hospital bed charges below cost, but set prices for new and high-tech diagnostic services above cost. They also allowed a 15 per cent profit margin on drugs. This system created perverse incentives for providers, who had to generate 90 per cent of their budgets from revenue-generating activities.[8] Over time, the profit motive became dominant, while healing ill patients took a back seat. Hospitals, clinics, and village doctors gradually became profit-seeking entities. The government's pricing policy created a leveraging

[8] See discussion in Eggleston et al. (2008).

effect whereby a provider had to dispense USD 7 worth of drugs to earn USD 1 in profit. Subsequently, providers overprescribed drugs and tests, and hospitals raced to introduce high-tech services and expensive, imported drugs that gave them higher profit margins. These medical practices not only caused rapid health expenditure inflation, but also harmed patients with unnecessary surgeries and hospitalizations, adverse reactions from the over-use of drugs, drug toxicity from the use of multiple drugs, and false-positives from poorly executed tests.

The unfortunate consequences of this combination of policy changes are best understood from three perspectives: disparities between rural and urban residents, deficient quality of health care, and rising health expenditure inflation. For instance, in 2003, mortality among children under age five was 33 per 1,000 in rural areas, but only 15 in urban locales. Maternal mortality numbered 65 and 28 per 100,000 respectively in rural and urban areas in 2002—a more than two-fold gap.[9] As for the quality of care, one indicator is the inappropriate use of prescription drugs. Data show 75 per cent of patients suffering from the common cold are prescribed antibiotics, more than double the international average of 30 per cent.[10] Another major consequence of China's health policies is the country's rapidly rising health expenditure inflation rate, which reflects the impact of these policies on the efficiency of providing health care and on the rational use of scarce resources. Chinese health expenditures have increased over the past 30 years, albeit from a low base. From 1978 to 2011, personal health spending per capita in China increased by a multiple of 164, from RMB 11 to RMB 1,801 (or from roughly USD 6 to USD 280). At the same time, the Consumer Price Index increased by 5.65 times. A huge portion of this expenditure was for high-tech tests and unnecessary drugs; about half of Chinese health care spending is devoted to drugs, as compared to only 10 per cent in the United States.

The transformation of China into a socialist market economy beginning in 1978 led to the collapse of the commune/enterprise-based social welfare model in China. China did not replace the social welfare system for rural residents for 25 years, or until 2003, while a new system was developed for employees of state enterprises by the mid-1990s.

Converging Streams of Forces Drive UHC

Although the Chinese people were experiencing serious problems in access to affordable and reasonable quality health care, the situation might not necessarily have led to policy changes. So what forces did lead China to introduce and implement major reform in 2009? In fact, there was a complex set of factors.

In order to explain how Chinese health reform came about, we adopted John Kingdon's political economy theory of organizing different forces. According to Kingdon (1984), several different critical forces have to converge to establish policy reform. In the context of this paper, Kingdon's multiple streams theory will be used to examine China's policy to reform its health system in 2009. Kingdon's theory consists of three "streams:" the *problem* stream, the *policy* stream and the *politics* stream. The problem stream forces policy makers to recognize the importance of a problem and give it priority. The policy stream is the process by which policy proposals are generated, debated, revised, and put forth for serious consideration. The politics stream refers to political factors that influence agendas, such as changes in elected officials, political climate or mood, and the voices of advocacy or opposition groups. Kingdon argues that

[9] Ministry of Health of PRC (2012) China's Health Statistics Yearbook 2012, and previous years.
[10] Yip and Hsiao (2008).

the three streams are relatively independent and have "lives" of their own. We modified Kingdon's framework in the context of China by showing that the streams interact with each other, rather than being independent. Moreover, we added another critical stream—reform— a factor that Kingdon subsumed under the policy stream. We would argue that Kingdon theorized concerning reforms in general, not specifically about any new major programme that requires significant additional government spending. But when a nation reforms its social safety net, fiscal capacity is a critical factor.

We also want to highlight the fact that China differs from Kingdon's framework in one distinct aspect. His theory has been used extensively to analyse the policy changes that occur in developed countries under a democratic regime. But China has a highly centralized and authoritarian government controlled by the Chinese Communist Party (CCP). The Politburo of the CCP (22 members in 2006 when health reforms were contemplated) sets national policies, allocates budgets and controls all administrative, legal, and executive appointments. The Central Committee of the CCP elects politburo members, whose final decisions are made by consensus, for a five-year term. At the apex of power is the Politburo's standing committee (nine members in 2006), composed of the President, Chairman of the People's Congress, Premier and others. The President is the head of state and chairs the CCP, while the Premier leads the executive branch of the government. The National People's Congress is under the CCP's leadership. While laws must be enacted by the Congress, it has relatively little independence and usually passes laws to legitimize the decisions of the Politburo. As a result, Chinese high-level political leaders can directly make decisions regarding health reform and these policies will be formulated and executed by the bureaucracy.

In political science literature, China is often characterized as an authoritarian regime. According to Linz (1964), the political leaders in an authoritarian regime pay special attention to "easily recognizable societal problems" such as underdevelopment or insurgency. Efforts to tackle these obvious problems help build legitimacy. However, the Chinese political process has departed from the traditional definition of authoritarianism. Since economic reform began in 1978, the Chinese political system has evolved and is now permeated with a wide variety of participatory and deliberative practices—including the participation of academics, domestic and foreign interest groups, international organizations, and foreign advisors—in its problem identification and design of policy options. Nowadays, the public, non-governmental organizations (NGOs), and a wide range of interest groups also participate in the decision-making process by giving evidence, making comments, and providing information, not only through traditional media but also on the Internet. The health reform we describe in this paper provides a vivid illustration of the fact that China's authoritarian government incorporates public deliberation.

The problem stream: Recognizing the problems and diagnosing their root causes

The problem stream has two stages. First, political leaders and the general public must recognize the existence of a serious problem. Second, under ideal circumstances, the root causes of the problem can be accurately diagnosed. Our discussion will begin with the identification of a health care problem in China.

We have explained in the previous section that after China's 1978 economic reforms, Chinese patients had increasing difficulty accessing affordable health care of reasonable quality. These problems first became noticeable in the late 1980s; as they became more widespread, negative public opinion began to form and reports of health care problems

began to appear in the media. Academics also conducted studies to document the problems. Eventually, this situation resulted in the advent of the widespread popular 1990s lament: "*kanbingnan, kanbinggui,*" or "insurmountable access barrier to health care, insurmountably high health costs". Both the phrase itself and the sentiment behind it soon gained wide recognition, appearing on television, in the print press and later on internet social networks. The lament, reflecting nationwide social discontent caught the attention of political leaders.

Chinese political leaders had long recognized some of the health system problems caused by economic reform. For example, they recognized that workers would lose their social safety net once the reform of state-owned enterprises (SOEs) was well underway in early 1990s, with massive downsizing of SOEs. It was in this context that Employee Medical Insurance (EMI) was piloted in 1994 and established in 1998. This insurance scheme, however, only covered formal sector employees, leaving the majority of urban residents (i.e., workers in the informal sector, retirees and the unemployed) uninsured.

During the 1990s, as Premier Zhu Rongji and his team focused on economic reform, problems in the social sector were considered distractions or embarrassments. We present an example here. In 1995 the World Bank conducted a study of China's health sector at the request of the Chinese government and presented its findings based on empirical evidence. The study found a number of problems, including stagnating improvements in health status, inequitable access, vast portions of the population uninsured, inefficient resource allocation and escalating health costs. The study concluded that the Chinese government must reform its health system.[11] Upon receiving a draft of the report, the government refused to accept it and pressured the World Bank to revise the report to make the situation sound less dire.[12] Even when a less critical, revised report was produced, the government tried to ignore it and took no action to remedy its health problems.

Eventually, the intensity of the public outcry of "*kanbingnan*, *kanbinggui*" gained serious political attention at the end of 1990s because of widespread social protests of health problems. However, the government's recognition of the problems did not necessarily mean that they believed was feasible to address these problems at that time. Political leaders have to first diagnose the roots of the problems so they can decide what policy choices can remedy them.

Since the early 1990s, both domestic and foreign scholars, as well as international organizations, have been persistent and timely in diagnosing the problems in the Chinese health sector. For instance, Chinese policy makers failed to identify the connection between lack of health insurance and impoverishment in rural areas. Political leaders did not believe that impoverishment could be caused by medical expenses, despite evidence produced by research studies conducted by Chinese scholars;[13] the government dismissed these findings as isolated conditions in selected poverty areas. It was not until a 1993-1995 nationwide study, (organized by Hsiao with the Chinese Network of Health Economic Research, funded by the United Nations Children's Fund/UNICEF, New York) gathered evidence throughout China that the government was convinced that health expenses can be a major cause of impoverishment. This study found, and documented, the widespread and dramatic effects when high out-of-pocket health expenditures drive people into poverty. It gave

[11] See Saxenian and McGreevey (1996).
[12] Interview with William Hsiao, a principal author of the World Bank report.
[13] See discussion and sources in Liu et al. (2011).

evidence of the reality existing on the ground, that political leaders had either previously been unaware of or had easily dismissed as unrepresentative. This empirical, nationwide information led top political leaders to organize the first Chinese National Health Conference, held in 1996. At this conference, President Jiang called for government programmes to alleviate poverty generated by medical expenses as part of China's anti-poverty programmes.[14] However, the Ministry of Finance (MOF) still argued that China did not have the fiscal resources to finance national health insurance programmes. Instead, it funded several pilot studies and invested more resources in the basic infrastructure of township health centres in poor regions.

The severe acute respiratory syndrome (SARS) epidemic marked a new era for the recognition of the problem as well as of its root causes. For example, a 2003 article by a prominent political scientist, Wang Shaoguang, argued that SARS would not an isolated incident, given China's weak health system caused by improper health policy over the past decades.[15] Chinese intellectuals, especially progressives, shared this view widely. At the same time, the World Bank sponsored a study to be conducted by the Development Research Centre of the State Council (DRC), a semi-independent think tank, to critically examine China's health system. (As DRC has often conducted thorough studies to inform the Premier and all the ministers, rising above the ministries' bureaucratic interests, its reports are considered objective and unbiased, free from the strong vested interests of each ministry.)

Led by Yanfeng Ge, in 2006 the DRC submitted a report on the Chinese health system which concluded that Chinese health policies since the mid-1980s were a failure. The report enumerated the major problems facing the Chinese health system, with extensive evidence of each one, going beyond impoverishment caused by medical expenses. It highlighted inequities in both access to and quality of health services, as well as inefficiencies in the health system. While these problems were already well known among health officials, the DRC report gave legitimacy to previous findings because the think tank has the confidence of top policy makers.

Most importantly, the DRC report concluded that China's health care problems were caused by government policy adopted in the mid-1980s, which relies on private financing and allow health care delivery to be driven by market forces. It also placed blame on irrational pricing and incentives in the health system. The report's major findings were published in a popular newspaper, leading to a firestorm of debate.[16] The MoH tried to defend itself but was nonetheless held responsible for the poor performance of the health system. Thus, by identifying the root causes, the DRC study served as a cornerstone for the government to design new policies to remedy China's health care problems.

In 2006, Premier Wen included the problem of "*kanbingnan, kanbinggui*" in his Government Work Report as well as in the Five-Year Plan for the National Economic and Social Development Of China. By that point, the Chinese government had

[14] However, the recognition of the problem was not matched by political action. The intensity of political pressure on this health issue had not reached a critical point. As a result, while CCP and the State Council made policy pronouncements, they did not allocate additional funds to address the problem, a necessary condition for translating policy announcements into concrete action. We see similar situations when globe health care is written into a constitution as a right. When countries lack the capacity for implementation or access to reasonable funding, these constitutional pronouncements remain empty rhetoric.

[15] See Wang (2004) for the English version.

[16] See "Chinese Health Reform Was Basically a Failure" July, 29, 2005. *Chinese Youth Daily*.

committed itself to solving the problem of "*kanbingnan, kanbinggui*" without further delay.

However, the DRC study did not highlight another major root cause: the governance structure of health care which divides authority among several powerful ministries. Because each ministry was protecting their own bureaucratic turf, they often issued contradictory policies that impaired the equity, effectiveness and efficiency of health care.

The policy stream: The ideological debate and the policies that emerged from it

The policy stream is a process whereby major stakeholders identify problems and propose different policy options for debate. Kingdon argued that there are "policy entrepreneurs" (e.g., elected officials, civil servants, lobbyists, academics, and journalists) who play an important role in this process. However, the authoritarian nature of the political regime in China left limited space for "policy entrepreneurs." As a result, the ideologies of political leaders and bureaucrats directly shape the direction of reform and its associated policies.

Since 1978, the principal ideological issue of China's health reforms, including the most recent one that led to UHC, was centred on the relative roles of market and government in health financing and the provision of health care. This debate of the roles of government versus the market began in the early 1980s, but without great intensity because, as most leaders and experts recognized that the government did not have the financial resources to fund health care, the debate became moot. However, the fiscal situation changed after the year 2000. From 2006-2008, national debates on this classic ideological divide paralyzed health reform efforts. It was not until late 2008 that the issue was partially resolved for health care financing and the delivery of basic health services; the winning ideology fundamentally shaped reform and provided detailed actions for basic health care. Where the ideological divide has not yet been resolved, as on the question of whether China needs to maintain a public hospital system in cities, reforms remain stalled.

China's ideological debate began by focusing on economics. Having learned from the failures of a centrally planned economy, China sought a new theory and strategy for its economic development that could produce rapid economic growth. Neo-classic economic theory and neoliberalism gained favour. The main strategy was to liberalize the economy and move from a centrally planned economy to a market economy. After Deng Xiaoping's southern tour in the spring of 1992, Chinese authorities officially legitimized the market economy and reinstated it as the guiding ideology for economic reform.

The Chinese health system originated with the communist ideology that called for government to play a central role in financing and providing health services. When China started its economic reform and transformed from a planned to a market economy, Chinese political leaders and bureaucrats became ambivalent about the role of government in health care. In the first two decades of reform, the Chinese government focused its priority on reforming economic organization and production. The government adopted a "benign neglect" position toward health care. As explained previously, the government reduced public funding for health care and left the funding and provision of health services to the market with a laissez-faire policy. For instance, in September 1992, the State Council issued a document titled "Instructions on Health

Reform," that encouraged public hospitals to operate income-earning sideline services/businesses. Hospitals began to charge high user fees for "special attendance" and "special wards." Doctors could earn high incomes by moonlighting at other hospitals in the name of inter-hospital cooperation. The flurry of activities in the medical market led to a debate inside the Ministry of Health (MoH) about whether the market should take the leading role in providing health services,[17] and also caused concern among top Chinese political leaders.

Meanwhile, Chinese academics and health policy analysts began to question the ideology of the market in the health sector. A group of experts in health policy and economics had gradually been developed since 1985 with the funding of a World Bank loan. That year, China established the Network of Health Economic Research which initially included seven leading Chinese universities that were focused on learning neoclassical economic theory and establishing contacts with foreign experts. This network eventually expanded to more than 20 universities. The theory and evidence for market failure in health was systematically introduced to China, which created conflict with the popular belief among key Chinese economic decision makers that the market is a panacea. Awareness of market failures in health began to spread. By August 1993, the government convened an international conference and invited economic experts in health from abroad for deliberations. The Network, MoH, and the powerful State Council's National Development and Reform Commission (NDRC) jointly organized this international conference in Beijing, inviting global experts like Uwe Reinhardt, William Hsiao, Alan Maynard, Alexander Preker, and Allan Detsky. At the meeting, the international experts emphasized the market failures in the health sector in order to alert domestic researchers and government officials. After the symposium, the content of the meeting was directly reported to China's highest-level decision makers.

It is noteworthy that, unlike the more informed central government leaders, most local government leaders had not learned about market failures in health; consequently, they were more likely to follow the market ideology and privatize health care. One extreme example was Suqian City in Jiangsu province, which adopted "complete marketization" and sold all public hospitals to private investors starting in 1999—a reform approved by top city officials. One reason local governments welcomed the privatization of health care was that it enabled them to unload a heavy fiscal burden from local budgets.[18]

The SARS crisis of 2003 served as a catalyst for a wide range of reflections on the ideology of market-driven funding and provision of health care. For instance, several major articles and reports pointed to the marketization and privatization of health care as the culprit behind the weak health system and public health crisis.

The passionate debate between intellectuals about the relative roles of market and government in the health sector became intense after SARS, dividing intellectuals into pro-market and pro-government camps. The important proponents of the pro-government camp included Ling Li and Yanfeng Ge, while Gordon Liu and Xin Gu were representatives of the pro-market camp. It is noteworthy that senior scholars who had influenced China's economic reform, such as Qi-ren Zhou, supported the market camp. To some extent, they were fighting to defend their theory and justify ideologies

[17] For example, in May 1993, Mr. Yin, the Deputy Minister of Health, argued against market-oriented health reform at an MoH working meeting. This was regarded as "objecting to the reform with conservative thoughts" by the other camp within the MoH. see http://history.sina.com.cn/his/zl/2013-07-22/102650629_2.shtml in Chinese.

[18] See Montinola (1995) for an explanation of the fiscal system of central and local governments.

that had been used in the past. Nevertheless, SARS and the evidence of market failures called for government action.

After the SARS experience, there was a basic consensus between the two camps that the Chinese government has to be the primary source of financing for essential health services and the provision of public goods such as preventive services. The major remaining difference of opinion lay in the delivery of hospital services. The pro-government camp argued that government must rely on a large network of public hospitals to provide effective hospital services for everyone, while the pro-market camp called for a privatized hospital system in which the government would only play a purchaser role under a social insurance system. The pro-market camp argued that privatized hospitals would produce higher quality and more efficient hospital services than public hospitals. To date, this debate remains unsettled, with each camp cherry-picking evidence from domestic and international experience to support its argument. However, in establishing the 2009 health reforms, by 2011 China had made huge gains in social health insurance coverage through government-subsidizing premiums. Still, there was little progress in the reform of public hospitals, largely due to conflicting ideologies in the provision of medical services.

Throughout the debate about hospital reform, each camp put forward its policy recommendations although neither camp provided a concrete reform plan. Advocates on both sides reference other countries' systems of universal coverage to set the direction of China's reform. The pro-government camp, arguing for the public provision of health services, looked to the United Kingdom's National Health Service system as an ideal model, while the pro-market camp argued that the government should purchase health care from a competitive market as do Medicare and Medicaid in the United States. This debate has been called "the battle of models" by the media.[19]

A major influence that resolved a part of the debate between the pro-government and pro-market camps was the ideology shift that guided the establishment of a social safety net under the Hu-Wen regime. Started in 2005, the regime's ideological campaign for a harmonious socialist society stated that the government had a responsibility to provide citizens with a social safety net, including health care. However, after nearly 30 years of market-oriented reform geared towards economic growth, the widening wealth gap could be seen as a by-product of China's economic and social development policies. Adverse effects of this development included social and political instability, unequal opportunities for the Chinese people, and discrimination in access to public health, education and pensions. China had to balance economic and social development.

In October 2006, after the 6th Plenary Session of the 16th Party Central Committee which focused on the topic of socialist harmonious society, the Politburo held its (35th) collective study session, taking health reform as its theme. Soon after the study session, President Hu declared the goal of health reform as, "Everyone has access to basic health care." Given this background, Chinese political leaders supported some ideas from the government-camp for the UHC reform of 2009, though ideological battles about hospitals continued within the government. At the same time, several guiding principles for the new round of health reform were developed, such as "Public health facilities should pursue pubic interests." and "Health issues are the responsibility of the Party and the government."

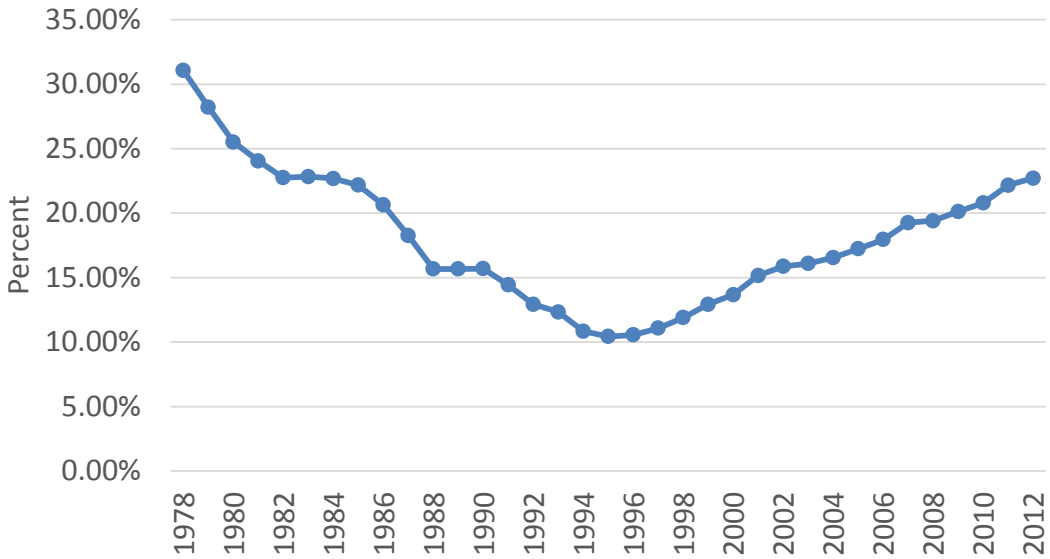
[19] See Jianfeng, bai http://finance.people.com.cn/GB/1045/4863636.html

The financial stream: Available fiscal space

Achieving UHC requires substantial financial resources. While expanding health insurance coverage by subsidizing premiums, China also had to invest more in primary care facilities and human resources. All of these programmes need significant additional public spending.

In the early 1980s, China's health policy was driven by fiscal constraints. As in all other former socialist nations that shifted from a planned socialist economy to a market economy, government revenue dropped sharply, from 34 per cent of GDP in 1978 to 11 per cent of GDP in 1994, as Figure 1 shows,[20] as the government's capacity to finance programmes declined. Then, in 1994, China reformed its taxation and public finance system, and government revenues have been increasing steadily ever since. During the decade 2001-2011, government revenues increased dramatically: more than 20 per cent per year on average. When health reform was debated in 2006-2008, fiscal constraints were not a major consideration, although the Ministry of Finance did question the absorptive capacity of the health system to use large amounts of the new funds efficiently and effectively.

Figure 1: Government Revenue as a Percentage of GDP



Source: The National Bureau of Statistics "China statistical yearbook." *Beijing: Zhongguo tongji chubanshe, 1978-2014.*

The phenomenal growth of Chinese government revenues during the past 15 years seems like an accounting error. In numbers, revenue has increased "from USD 113 billion in 1995 to USD 1.86 trillion in 2012," measured in 2012-constant USD (Naughton 2014). In contrast to the situation in 1980s when the government lacked the funds to finance public health services and decided to turn to private financing, now the government has the revenue stream to fund an entire social safety net. For instance, the USD 125 billion of additional public spending over three years (2009-2011) that the

[20] In nominal absolute RMB, government revenue continued to increase. But inflation and government employee wage increases vastly outpaced revenue growth. As a result, government-financed programmes had to be reduced.

government committed to health only amounted to roughly 20 per cent of the increased revenues the government received during that period.

The politics stream: Setting priorities and formulating policy

The last stream in Kingdon's framework is the politics stream, which refers to political factors that influence agenda setting and policy formulation. In authoritarian China with its limited political transparency, the politics stream is entangled with problem identification and ideological issues. Nevertheless, its outline is still discernible.

In the 1980s and 1990s, top Chinese leaders were focused on how to move the Chinese economy from a centrally-planned socialist economy to a socialist market economy. People's health was essentially neglected and only drew political attention when the health system was believed to hinder economic reform, such as when workers laid off due to SEO[21] reform became uninsured. Otherwise, health issues were not priority items on the agenda. While poverty resulting from health expenses did receive some attention in 1996, little concrete action was taken until 2003.

The 2002-03 SARS epidemic shocked the Chinese political establishment, creating worldwide fear, particularly in China and its neighbors At first the government sought to limit public knowledge of this dreadful, contagious disease. But the news spread widely and quickly thanks to mobile technology. This unprecedented crisis forced China to restrict travel, quarantine any person with cold and fever, and confine people to their local neighbourhoods. Moreover, China's initial deny of the SARS epidemic received harsh scrutiny on an international level,[22] causing China's international image to suffer a serious blow. The SARS epidemic was not simply a public health problem, but rather the most severe socio-political crisis for Chinese leaders since the June 4th 1989 Tiananmen Square crackdown (Huang 2004). And it awakened the new political leaders, Hu and Wen, to the urgent need to reform China's health system. This was the first time that top Chinese leaders officially declared that health as a priority was equal to economic development.
The SARS crisis made Chinese political leaders recognize the critical role that government must play to safeguard the population's health, especially in rural areas where the health system is weakest.

In addition to directly drawing political leaders' attention to public health issues, the SARS crisis served as a catalyst for Chinese civil society to voice its views about balancing the goals of economic development and the well-being of all the people. Since economic reform began, a portion of the Chinese population had rapidly became rich. However, the majority of Chinese did not enjoy the same rate of rising income, resulting in alarming economic, social, and health disparities. Moreover, China lacked safety nets for all its citizens in education, health care and income. Although annual GDP growth continued to be of paramount importance to the government, Chinese political leaders were sensitive to public dissatisfaction and social unrest over the inequitable conditions of economic development and social safety net issues.

In 2004, the CCP promulgated the "Scientific Principles for Development," which highlighted the importance of social safety nets, including one for health), and paved the way for health system reform (including universal health coverage). China began a

[21] Seasoned Equity Offering
[22] For example, editorials in the *New York Times,* 2003, "Diagnosing SARS in China," lambasted "Beijing's catastrophic mishandling of the health crisis," likening it to the Soviet fumbling over Chernobyl.

national campaign that shifted the focus of the development agenda from "economic growth" to "social harmony." Since "improving people's livelihood" was highlighted in the campaign, health now stood side by side with economic growth. This change reflects the political decision to adopt more egalitarian and populist polices in order to fulfill the government's new vision of "social harmony."[23] With this foundation laid, political priorities became closely aligned with those of other streams to allow for reform of China's health system to achieve UHC. The Politburo even held a session to study and discuss health sector reform in 2006. In that session, President Hu stated that the goal of health reform was "providing basic health care for all." At this meeting, several guiding principles were put forward, such as "People's health is the responsibility of the CCP and the government" and "Health services should serve public interests."

In June 2006, the government's newfound commitment to health sector reform established a powerful agency to plan and implement policy. The State Council set up an Inter-ministry Task Force, led by the powerful Minister of the National Development and Reform Commission (NDRC) and the Minister of Health (MoH), to design and launch health sector reform. Participating ministries included the Ministry of Finance, the Ministry of Labour and Social Security, the Ministry of Commerce, the National Federation of Labour; the initial count of 14 was eventually expanded to include 20 ministries and agencies—extremely rare for addressing problems beyond economic issues. Chinese political leaders recognized that Chinese ministries and agencies represent different stakeholders and bureaucratic interests; the Inter-ministry Task Force can therefore be seen as a planning mechanism for a health reform policy about which all stakeholders can reach consensus.

The Inter-Ministerial Task Force established four separate teams, each managed by the ministry responsible for that area, which operated independently. By the end of 2006, however, the Task Force found that it was impossible to set priorities and develop an integrated plan for reform using such a decentralized system. For example, the MoH recommended that public budgets finance public facilities, directly managed by the MoH, so that everyone could receive affordable health care. At the same time, the Ministry of Labour and Social Security argued that health should be financed through social health insurance, with the government subsidizing the premiums. In this way, social health insurance programmes would purchase services on behalf of patients from competing public and private facilities, instead of the government directly subsidizing public facilities.

Since developing an effective health reform plan was the top priority of the Task Force, it had to get its members to agree on a comprehensive reform policy. When this seemed impossible, the Task Force commissioned seven domestic and international non-governmental organizations to develop alternative health sector reform proposals. These organizations included four leading Chinese universities, the World Bank, the World Health Organization, and McKinsey & Co. A two-day high level conference (including the heads of 20 Chinese ministries and agencies) was held [dates?] to present and deliberate on the proposals. The proposals, however, reflected the ideological divide in China between government and market approaches to health care; they differed vastly on the roles given to government and the market in financing and delivery of health

[23] As mentioned in the Report of the Seventeenth National Congress of the CPC (2006): "The key point of constructing the Socialistic Harmonious Society is to address the real=life issues about which people are seriously concerned." In that sense, health care reform could be regarded as a realization of the vision of "social harmony."

care, as well as on the degree of regulation needed for domestic and foreign pharmaceutical and medical devices.

On the second day of the conference, the co-chair of the Task Force realized there would not be agreement between the ideological camps. At the last minute, the co-chair asked William Hsiao to organize the international experts attending the conference, but not affiliated with any of the proposals, to offer any broad policy guidelines that they could agree upon. Hsiao was given a hour at the end of the conference to present this group's conclusions. He presented several fundamental guidelines for policy based on economic theory and global evidence. They include:

- The government must finance prevention as a public good;
- If equity is a priority for a nation, the government must take the primary responsibility of financing health care;
- Since investments in primary care are most cost-effective in improving health, China should shift its high spending for hospital services to primary care;
- Serious market failures exist in health service delivery, brand name pharmaceuticals and medical devices, all of which must be regulated.

The group's recommendations were subsequently transmitted to the State Council.

After the conference, the Task Force drafted a policy proposal guided by the Hsiao group recommendations, with specific provisions reached by compromises between different ministries as well as outside economic and political stakeholders. The Task Force made its proposal public and solicited public comments before preparing the final version. This process is extremely unusual in the history of China's social policy: different ideological groups from both inside and outside of the government, as well as special interest groups such as the pharmaceutical industry and hospital management, all had a voice. This is why finalizing the policy formulation took nearly two years..

In April 2009, the Chinese central government announced the reform policy, stating that the goal of the health reforms is to establish a universal, basic health-care system which will provide safe, efficient, and affordable basic health care services for all Chinese residents by 2020. The reforms have three phases: the initial three years, 2009 to 2011, 2011 to 2015 and 2016-2020. The comprehensive goals were to be attained by 2020. The detailed actions of the initial three-year plan, which became the implementation plan, were also given.

The Policy Outcome: The 2009 Health System Reform toward Universal Health Coverage

The first three-year plan was anchored by five specific targets, (1) expanding insurance coverage; (2) making public health services available and equal for all; (3) improving the primary care delivery system to provide basic health care; (4) establishing a national essential drug system; and (5) piloting public hospital reforms. In this section, we explain the content of the reforms and the progress China has made in these five areas.

The Chinese government committed USD 124 billion of additional public spending for the first three years of health care reform. About half of this amount was allocated to subsidize premiums for people to enroll in insurance schemes; a third was used to strengthening the primary care delivery system (especially infrastructure-building and

training of personnel at rural primary health care facilities), and the rest to paying the recurrent expenses of basic public health services.

Universal insurance coverage

China had launched three insurance programmes prior to the 2009 health reforms which provided the foundation on which the government expanded the number of people covered by health insurance and the scope of benefits. Employee Medical Insurance (EMI) began in 1998, the New Cooperative Medical Scheme (NCMS) for rural residents began in 2003, and Urban Resident Basic Medical Insurance (URBMI), for urban residents not employed in the formal sector, began in 2007. The goal for the first three years of health reforms was to expand insurance coverage to over 90 per cent of the Chinese population. Table 1 (below) shows the composition of each scheme's coverage.

In order to expand insurance coverage, the Chinese government adopted a strategy to subsidize most of the insurance premiums for rural and urban residents not covered by EMI. For western regions of the country, where average income is lower, the government would subsidize close to 90 per cent of the premium. For the wealthier coastal provinces, the government subsidy would be lower— 70 per cent. Over the past few years, premiums increased so that the compensation rate could be improved. For example, the premium paid by the government under URBMI and NCMS rose from 80 Renminbi (RMB)[24] in 2008 to RMB 200 in 2011, a 250 per cent increase. In addition, a complementary Medical Assistance programme managed by the Ministry of Civil Affairs pays the individual's share of the premium for poor families. It is noteworthy that, in order to speed up the expansion of NCMS and URBMI, every leader of a village or urban neighbourhood and every mayor of a town or city was given an enrollment target as part of their performance measurement for future promotions. As a result, the number of people covered by insurance programmes grew rapidly during this period. In 2000, only 15 per cent of Chinese people were enrolled in EMI. By the end of 2011, the three programmes covered over 95 per cent of the population.

Because China's policy before 2009 was to achieve universal insurance coverage with shallow benefits, the NCMS and URBMI covered only inpatient services (NCMS household-based savings accounts paid for out-patient visits, but barely covered one outpatient visit per person each year). During the reform, coverage for outpatient services was gradually expanded.

Table 1 presents a comparison of the three insurance programmes; as of 2012, both NCMS and URBMI beneficiaries still had to bear about 50 per cent of their inpatient and outpatient expenditures (taking into account deductibles, co-payments, and reimbursement ceilings). The disparity in the benefit package between EMI and the other two programmes is significant. The Chinese government now allocates a portion of the premium to providing more comprehensive coverage for catastrophic medical expenses.

[24] USD 1= RMB 6.15.

Table 1: Summary of the three social health insurance programmes

	EMI		**URBMI**		**NCMS**	
Year	2008	2012	2008	2012	2008	2012
Target Population	Formal Sector workers		Children, students, elderly without previous employment, informal sector urban workers and some migrants		Rural residents	
Risk-pooling Unit	City	City	City	City	County	County
Enrollment, per cent	81%	94%	64%	93%	91.5%	98%
Total premium per person (RMB)	1,443	2,230	120	300	120	300
Government subsidy per person	NA	NA	80	240	80	240
Individual contribution	2-3% of salary	2-3% of salary	40	60	40	60
Employer contribution	6-8% of salary	6-8% of salary	NA	NA	NA	NA
Benefit design						
Inpatient reimbursement rate	67%	75%	44%	55%	38%	55%
Outpatient reimbursement rate	savings accounts	savings accounts	NA	50%	NA	50%
Total reimbursing ceiling	Four times average wage of employee in the city	Six times average wage of employee in the city	NA	Six times disposable income of local urban residents	NA	Eight times income of local farmers

Source: Adapted from Yip W, Hsiao W, Chen W, Hu S, Ma J, Maynard A, "Early Appraisal of China's Huge and Complex Health Care Reforms." Lancet, Vol. 379, March 3, 2012.

Prioritizing prevention

The new health reform gives priority to preventive medicine. In 2009, the government provided RMB 25 annually per person, paid to primary care doctors (such as village doctors and doctors in township health centres and urban community health centres who are responsible for public health) based on how many people live in the community they serve. This means that for a community of 1,000 people, , the primary care doctors could receive an additional budget of RMB 25,000 for public health work. Primary care doctors are authorized to perform 41 specific public health duties. Their tasks include providing immunization; prenatal and well-child care; regularly visiting home-bound patients; monitoring a set of infectious diseases, including tuberculosis; maintaining records of, and monitoring, the health condition of all patients with high blood pressure and diabetes and health education. However, China lacks a monitoring system to evaluate the performance of these primary care doctors and establish a payment system based on performance measurements. When providers cannot be held accountable, public health work is often just a formality.

Public investment in basic public health services

In addition to expanding insurance coverage, the Chinese government also sought to strengthen the country's health delivery systems. Investing in the primary care system is a major component of achieving UHC. China's long-term strategy to improve efficiency in resource allocation involves building a delivery system based on strong preventive and primary health care and anchored in community health centres in cities and township health centres in rural areas. Primary care providers will also eventually serve as "health gate-keepers," managing referrals to specialists and hospitals.

To meet these goals, the government directed funds to building primary care facilities and electronic information systems, as well as staffing these facilities with doctors and other health professionals. The 2009 health reforms allocated RMB 60 billion to establish or renew primary care facilities, mostly in under-served rural areas in Western China. China relies on village doctors and medical school graduates with three years of training to deliver health services; but these graduates are only qualified to provide basic primary care. China has a shortage of specialists, mainly in rural areas, as most specialists practice in cities. Chinese patients lack confidence in the quality of care provided by primary care providers. When patients need medical care of high quality, they rush to specialists. To address the lack of specialists and upgrade the primary care workforce, China is currently giving priority to training five-year medical school graduates as family physicians—a significant improvement over their current level of training. However, it will take years before patients trust the knowledge and skills of family physicians rather than seeking services from specialists.

Production, pricing and distribution of essential drugs

As mentioned in our analysis of the problem streams, the fact that Chinese hospitals receive a portion of their funding from selling essential drugs has led to a system of "medicine-subsidized health care." This has been a problem since the 1980s, causing the inflation of drug costs in Chinese hospitals. In response, the Chinese government sought to regulate the pharmaceutical supply chains. With the 2009 reforms, the government established the "essential medicine system" in order to reduce the overall cost of medicine. The central government published a catalogue of 307 types of basic medicines, and most provinces have created supplementary lists.[25] The government set targets for all primary care institutions to use only these essential drugs. These facilities would not be allowed to profit from essential drug sales because they would be sold at cost. The government also created a bidding platform for the procurement of essential drugs for these facilities.

The essential medicine system is controversial. While drugs on the list are selected by physicians and pharmacists organized by the MoH, they do not use rigorous scientific criteria for selection. Furthermore, the selection process is quite opaque and serious questions have been raised about the selection criteria and the adequacy of the essential drug list in promoting the use of cost-effective medications. For example, some drugs that were not selected for the essential drug list due to negative side effects or low efficacy (such as some eye drops, cimetidine and diethylstilbestrol), have been included on provincial supplementary lists.[26] The press has reported widespread corruption in the pharmaceutical bidding process, which has allowed hospitals to continue receiving kickbacks as well.

Reform of public hospitals

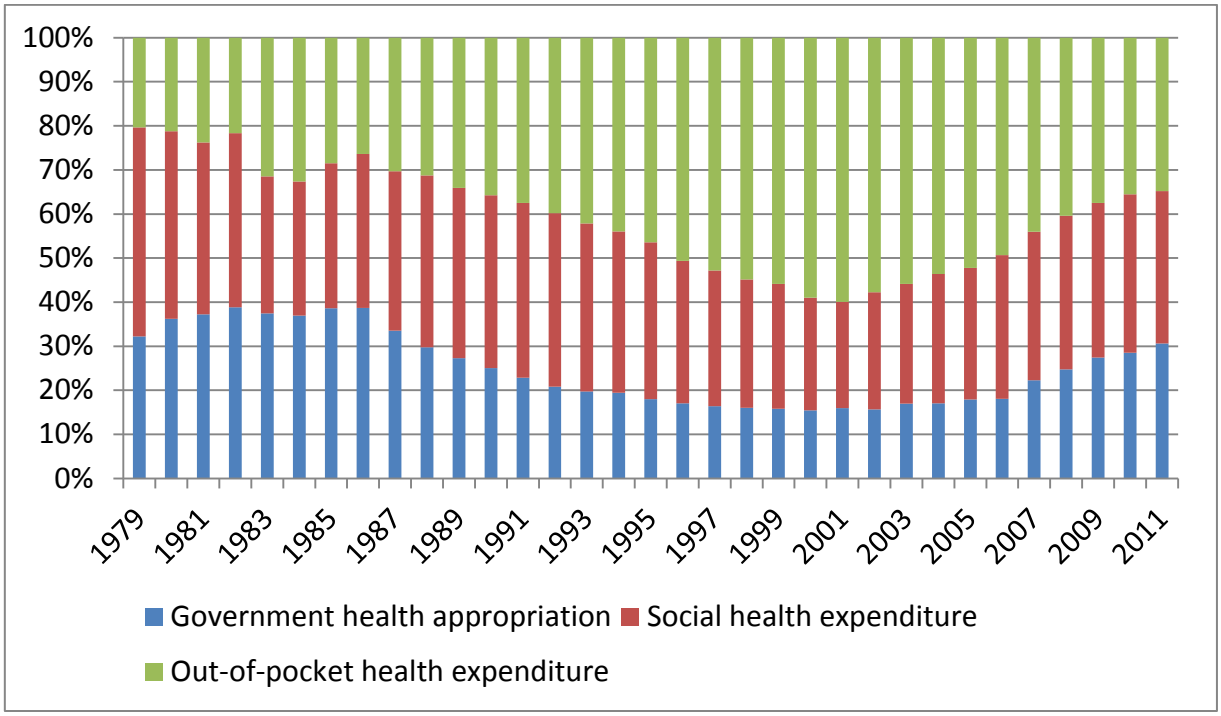
Public hospitals in China deliver over 90 per cent of the country's inpatient and outpatient services. The long-term success of health care reform, therefore, depends on whether the government can reform the hospital sector to improve the quality and efficiency of service provision and control the growth of health expenditures in order to reduce patients' financial risk and increase satisfaction with hospital services. The fundamental problems faced by Chinese public hospitals are that they are profit-driven and lack an explicit mission.

[25] See Yip et al. (2012).
[26] See Yang et al. (2013).

Although the reform of public hospitals was listed as a goal in the initial three-year health reform plan, there were no concrete guidelines from the central government. During 2009-2011 seventeen pilot cities were selected to experiment with different approaches to reforming public hospitals based on local conditions. However, because the mission of the public hospitals was not clearly defined by the central government at the outset, each of these cities experimented with one of two measures for managing public hospitals, such as creating new management bureaus, purchaser-provider splits, and making public hospitals more autonomous. Some cities even sold their public hospitals to private investors or to hospital workers' collectives. These experiments did not produce useful results that can guide national policy due to their cursory design and lack of scientific evaluations. As discussed, Chinese public hospitals had already become for-profit commercial entities and none of the pilot cities were able to change their hospitals' organizational behaviour. Until the missions of public hospitals are made very clear, and all contradictory Chinese policies and incentives currently in place are changed to motivate public hospitals to alter their behaviour, the reform of Chinese public hospitals will remain a challenge. In order to implement the above-mentioned health reforms between 2009 and 2011, the Chinese government spent an additional RMB 1.5 trillion. This caused the share of government expenditure as a percentage of total health expenditure to increase dramatically—from 18 per cent in 2006 to 30 per cent in 2011.

Figure 1 shows the changes in public share of total health expenditures.

Figure 1: The composition of total health expenditure



Source: Ministry of Health of PRC. China's Health Statistics Yearbook 2012 (and Previous Years) Beijing, China: Peking Union Medical College Press.

Achievements and Remaining Challenges

With this additional funding and the reforms noted above, China achieved 95 per cent health insurance coverage by 2011.[27] Through government investment in preventive and primary care, these services are now available to almost everyone. These achievements would not have been possible without the government's persistent efforts to implement reform, such as setting performance targets to be achieved for local officials. However, as we noted earlier, the quality of primary and hospital care varies between rich and poor and urban and rural regions. We conclude that China has not achieved universal access to "equal" quality of health services. This section presents evidence on the impact of China's UHC by looking at equitable access to basic health care, its quality and affordability. We also examine cost control to ascertain the sustainability of the system.

Health equality: Access, affordability and risk protection

The most significant achievement of the reform effort is in insurance coverage, which has helped to make health care more affordable. Health insurance coverage in China increased sharply from 15 per cent in 2000 to over 95 per cent by 2011, covering 1.28 billion people. This immense coverage increase over such a short period represents the achievement of universal health coverage in China, which improves health equity in terms of access and affordability. Such an achievement resulted from an ideological shift in which the government reinstated its central role in financing health care, supported by increased fiscal capacity thanks to China's rapid economic growth, as mentioned in the analysis of streams of forces.

Better access to health services in multiple dimensions has been reported as a result of the 2009 health system reform. The analyses[28] of the National Health Services Survey of 2003, 2008, and 2011 show that physical access to health facilities improved between 2008 and 2011, with clear improvement in rural western and central regions, where 83.3 per cent of people had physical access to health facilities in 2011. There was also a large increase in hospital admissions in rural and western China between 2003 and 2011, with the annual national average increasing by 8.5 per cent between 2008 and 2011. Antenatal care coverage and hospital delivery rates increased dramatically between 2003 and 2011 nationwide, with the largest increase occurring in rural, western, and central regions of China. For all of these measures, the reported gains have narrowed the gaps between rural, western, and central regions and eastern China. Improved access can be attributed to a variety of health reform efforts. These include increased government subsidies for insurance premiums, deepened insurance benefit packages, improved medical assistance programmes, increased investment in public service provision and the building of health infrastructure and establishing an essential drug system, among others.

UHC has also made health care more affordable. While universal insurance coverage has been attained in China, benefits are currently shallow according to government strategy, benefit packages have been gradually increasing and will continue to do so. As mentioned above, the first wave of NCMS and URBMI covered only inpatient services, but benefits have since been expanded to include outpatient services. However, specific benefits and reimbursement rates vary across the three major health insurance schemes,

[27] See "95% of Chinese have public medical insurance" in http://english.cntv.cn/programme/newshour/20120419/115171.shtml. This number is confirmed by independent study such as Yip et al. (2012).

[28] See discussion and resources in Meng et. al. 2012.

as shown in Table 2. These differences suggest dissimilar insurance benefits between rural or urban residents and between different socio-economic groups. As of 2012, NCMS and URBMI beneficiaries have to pay a higher percentage of their inpatient and outpatient expenses than do formal sector workers covered under EMI. The disparity in benefits between NCMS and URBMI and EMI is significant, representing different affordability of health services between formal sector employees and others.

High health insurance coverage may enable health reform to offer better financial protection. The evidence on this front is mixed, however; even when an effect is found, it varies across regions and population groups. According to Meng et.al.,[29] there was a 5 per cent annual reduction in self-discharges from hospitals from 2008-2011, with western regions showing the highest annual reduction of about 8 per cent. This suggests improved affordability of health care. In addition, the percentage of households experiencing catastrophic health expenditures increased by 2.8 per cent annually between 2003 and 2008, but then decreased by 2.6 per cent per year between 2008 and 2011. The biggest decrease occurred in rural and western China, with annual rates of reduction of 3.0 per cent and 4.7 per cent, respectively, from 2008 to 2011. Nevertheless, the study also shows a disparity between the poorest and the richest quintile with regards to the percentage of households experiencing catastrophic health expenses between 2003 and 2011, with poorer households having this experience twice as often as their richer counterparts.[30]

However, inequity in health outcomes between urban and rural residents remains a major problem for China. Table 2 shows the average differences over five years (2006-2010) in health status. China does publish reliable data on health status between urban and rural, but not between different income groups.

Table 2: Comparison of Health Status between Rural and Urban Residents, 2006–2010

	National	Urban	Rural	Ratio (urban to rural)
IMR (per 1,000 live births)	14.86	6.84	17.96	1:2.62
MMR (per 10,000 births)	34.76	27.1	37.4	1:1.38
Life Expectancy	74.83	77.33	72.29	1.07:1

Sources: IMR and MMR are calculated by averaging the five-year period; data are from National Bureau of Statistics of People's Republic of China, *China Statistical Yearbook 2012.* Beijing: Chinese Statistics Press. National life expectancy is from the 2010 Census, and rural and urban life expectancy are extrapolated using the existing data before the 2010 Census. See Ying Hu, 2010. "The Average Life Expectancy Analysis on China's Current Population in Urban and Rural," *Population & Development* 16 (2): 41–47.

A major cause of inequity in health status between rural and urban residents is the distribution of human resources. Like most nations, China has difficulty attracting and retaining well-trained physicians to rural towns and small cities. Highly trained physicians and specialists flood to large cities.

[29] See Meng et al. (2012).

[30] As suggested by Yip et al. (2012). NCMS though it has increased health service utilization to varying degrees as reported by different studies, does not show "measurable effect on the reduction of financial risk." Few studies have been carried out to assess the financial protection effect of URBMI. One study shows that the out of pocket payment for hospitalization for URBMI enrollees was about 26 per cent lower than uninsured urban residents, suggesting some degree of financial protection with URBMI. See Liu et al. (2011).

Another specific inequity involves the differences in insurance benefits among the three insurance plans shown in table 1. The current differences in the benefit packages have also resulted in very different levels of funding requirements. However, not all of the difference in premiums is due to differences in benefits; a large part is due to age differences of the insured individuals in each pool, and the much higher compensation of physicians and health workers in the cities. China aims to merge the three packages into one over the next decade.

In sum, there seems to be strong evidence of improved and more equal access to health care associated with China's UHC. On the other hand, the reform's effect on protection against financial risk and quality of care is not obvious. In addition, little evidence exists on the health outcomes of patients affected by UHC, even though it is reasonable to speculate that they would improve. For example, the drastic increases in antenatal care coverage and mandatory hospital deliveries supported by government subsidy and insurance coverage will arguably lead to improvements in infant and maternal mortality. The lack of evidence for health outcomes may be further explained by the fact that the reforms are rather recent, and enough time has not passed to observe their effects. More importantly, the general lack of reliable national data for China that can support a thorough analysis based on rigorous assessment presents another challenge to assessing the health outcomes of system reform. Last but not least, the many moving parts of this complex reform, and significant variations in local governments' capacities to implement the reform policies, certainly makes assessment at the national level challenging.

Quality of care

The quality of health care is closely related to health care accessibility and expenditure, and is a critical outcome of the policy reforms. Numerous studies prior to the 2009 reform documented the over-prescription of drugs and overuse of intravenous (IV) therapy, both effects of distorted administration costs and the commercialization of public hospitals and clinics. For example, one study estimated that approximately half of antibiotic prescriptions in China were medically unnecessary, and many of these prescriptions were implicated in more than one million children becoming deaf or suffering neurological disorders (Wen 2005). Such patterns also contribute to the global problem of antimicrobial resistance. Insufficient evidence is available to conclude anything about the impact of Chinese health system reform on the quality of health care; though it is likely that the quality of care will improve as benefit packages are increased over time.

A recent report (Ministry of Health of the People's Republic of China 2011) by the MoH sheds some light on quality of care from the perspective of the proper use of medicines. Given that inappropriate use or over-prescription of essential medicines (e.g., antibiotics, infusions, hormones, intravenous injections) has been a common health care problem in China, this study compares the utilization of those medicines between facilities that had adopted the essential medicines (EM) programme and those that had not (non-EM), using data from primary health facilities in 83 counties and cities between 2007 and 2010. As shown in table 3, rural facilities that had adopted the EM programme show a greater reduction in inappropriate use of those medicines and in expenditure per prescription for upper respiratory traction infection, hypertension and diabetes, compared to their non-EM counterparts. Urban facilities demonstrated a more mixed picture, with a general trend of increased use for upper respiratory traction infection, but decreased use for hypertension and diabetes. Most of these trends,

however, were not statistically significant, and therefore do not provide strong evidence that the essential drug programme is leading to proper drug use (standard errors are shown in parentheses).

Table 3: Increases and decreases in use of drugs and expenditure per prescription among EM and non-EM facilities in 2007 and 2010

	Upper respiratory tract infection		Hypertension		Diabetes	
	Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
Use of antibiotics %	5.74	10.49	–9.43	–2.23	19.97	–28.68
SE %	(17.73)	(8.22)	(9.17)	(13.27)	(10.03)	(14.99)
Infusion %	1·68	–11·90	–10·81	–16·12	–0·73	–3·11
SE %	(22.50)	(10.77)	(13.39)	(13.16)	(4.54)	(23.40)
Use of hormones %	5.58	–0.20	NA	–2.84	NA	10.96
SE %	(9.70)	(9.55)		(4·17)		(8·93)
Use of IV injection %	4.36	–5.88	–9·90	–12·33	–20·45	–40·14
SE	(22·46)	(11·26)	(13.49)	(12.36)	(23.40)	(29.93)
Average expenditure per prescription in RMB	–15.20	–10.18	28.98	–24.28	18.93	8.09
SE %	(22.69)	(12.79)	(44.17)	(17.27)	(74.49)	(45.51)

Note: The figures in parenthesis are standard errors. **Source:** Adapted from Yip W, Hsiao W, Chen W, Hu S, Ma J, Maynard A. March 3, 2012. "Early Appraisal of China's Huge and Complex Health Care Reforms," Lancet, Vol. 379.

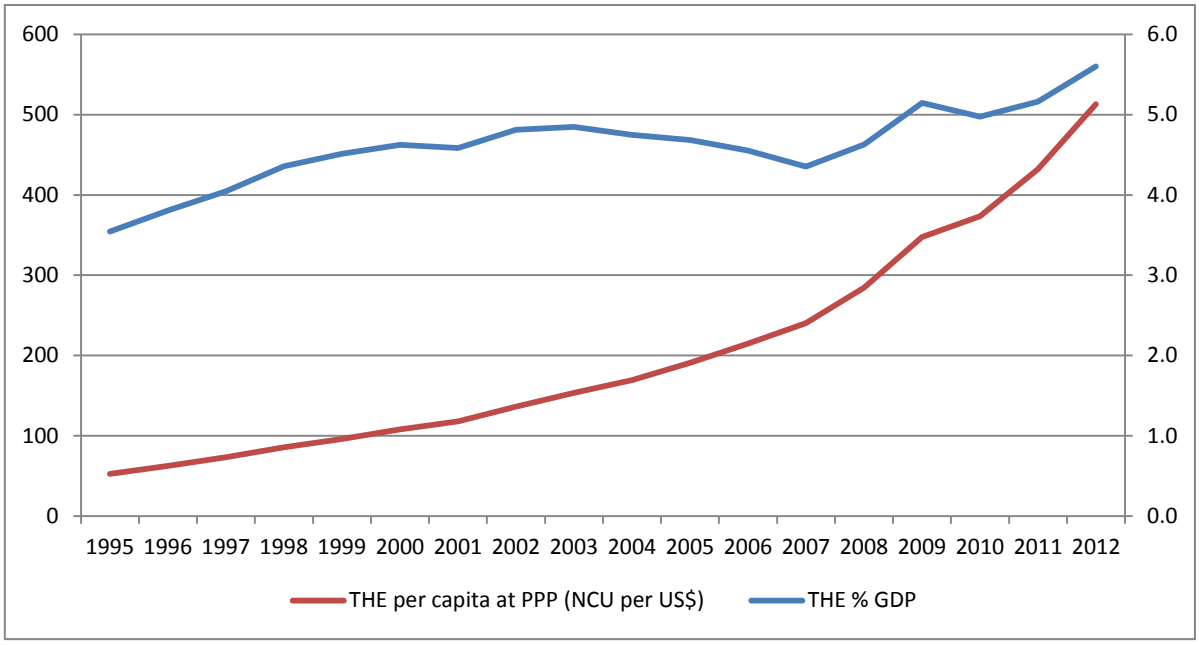
Cost control

China faces a major challenge that its health reform has not yet been able to solve: how to alter the behaviour of its public hospitals and physicians so that they serve the interests of the people. China's past policies transformed public hospitals into commercial, for-profit public entities and the profit motive now drives how medicine is practiced. As a result, public providers over-hospitalize patients, over-prescribe drugs, over-test, and use the most expensive drugs when lower cost generics are available. These profit-seeking behaviours harm patients, damage the quality of medical services, and cause rapid health expenditure inflation. Past efforts to transform public hospitals and physicians so that they serve the public interest have largely failed. The political economy of this situation shows that the interests of powerful stakeholders' can block effective government measures from reforming public hospitals and curbing their abuses. China's 2009 health reform designated 17 cities to pilot different models to deal with the aberrant behaviours, but they were unable to produce effective remedies.

As the social insurance programmes expanded, China is confronting high rates of health expenditure inflation due to lack of control of providers' misbehaviour. While China has experienced remarkable growth in per capita GDP, growth in health expenditure per person has outpaced it; national health expenditure as a per cent of GDP rose from 4.0 per cent in 1990 to 5.2 per cent in 2011. Figure 2 shows the rapid rate of increase. As the Chinese economy reaches the middle-income level, its growth is expected to slow down. There is a serious question of whether UHC can be sustained unless the inflation rate is curbed. While China spent a relatively high percentage of GDP on health compared to India's 3.9 per cent (in 2011), it spent relatively less than upper-middle-

income nations such as Mexico (6.2 per cent) and Brazil (8.9 per cent). Chinese spending will continue to grow at a fast pace as its population ages.

Figure 2: Increases in health expenditure per person and as a per cent of GDP



Note: THE = Total Health Expenditure: PPP = Purchasing Power Parity. **Source:** Ministry of Health of PRC. China's Health Statistics Yearbook 2012 (and previous years), Beijing, China: Peking Union Medical College Press, 2012.

Conclusion and Comments

China has rapidly achieved UHC with benefits that including prevention and comprehensive curative services. Indeed, perhaps China is the first large, middle-income nation with a population over 100 million that has attained effective universal coverage for more than primary care. Effective coverage for preventive and primary care was attained with large new investments in the supply of these services. The benefits for inpatient hospital services, however, require patients to contribute high cost-sharing that equals, on average, approximately 50 per cent of costs. However, as its fiscal capacity increases over the next few years, China plans to cover more than 70 per cent of hospital costs.

Achieving even the basic UHC takes strong political forces and financial resources. Framed in John Kingdon's theory that reforms require the convergence of problem recognition, political space created by catalytic moments, innovative policy ideas and fiscal space, we showed how the four essential streams converged to produce China's reform. The streams moved slowly over a decade before a critical mass was reached. Using Kingdon's theory moved us beyond the frequently used political economy method of analysing how reforms are introduced when political compromises are made by various stakeholders. The Chinese case offers an historical analysis of the complex process when several essential forces have to mature and come together.

The Chinese case also holds several valuable lessons for other nations. Like other nations that have successfully pursued UHC, such as Thailand, the China case illustrates the actions that nations have to take to achieve universal e*ffective* coverage rather than only i*nsurance* coverage. Effective coverage means that the supply of quality health

services is available throughout the country, and that people can afford to access these services. Once the government decides to invest more in health, the money spigot can be turned on, but to transform money into effective services may require the reform of current payment/incentives, monitoring the quality of health services, installing information systems, accountability for outcomes and altering the organization and management of health organizations. Such complex change requires technical know-how and takes a long time to implement.

Effective coverage requires a systemic reform of health care delivery to extend an adequate supply of quality services and drugs to underserved, poor villages and complicated and sophisticated human resource policies have to be designed and implemented. Moreover, the structure and governance of public health services often have to be altered to improve their quality and efficiency. Excessive profit taking by private providers must be curbed. Most nations, like China, are suffering from inefficient health care delivery systems. The World Health Organization (WHO) estimates that globally, savings of 30 per cent can be produced by removing most of the inefficiency. However, reform does have an impact on the behaviour of vested interest groups. China's attempt to reform its public hospitals illustrates the strong political push-back from public hospitals and their physician staff whose income from profit-driven practices may be reduced. As a result, China is still groping for a feasible solution for reforming its public hospitals.

This paper shows how international ideas such as equity, neoliberalism, market forces and social health insurance influenced China's health reforms and decision making. At the same time, ideology also plays a major role in formulating policy. Most people believe free market ideology is the best driver of economic growth, but many blindly extend the free market ideology to the health sector without considering the equity consequences and the potential for serious market failure in the health sector. Despite of the adverse consequences of following a market strategy between the early 1980s and the early 2000s, the free market ideology still pervades the health sector in the current health policy debates in China. Although the United States followed a free market ideology in developing its health sector, its devastating outcomes of inequity, exorbitant health costs, and uneven quality of health services have not persuaded Americans to change course. The experience of China and the United States demonstrates that even strong empirical evidence does not necessarily alter people's fundamental ideological beliefs.

Finally, the China case demonstrates the importance of medical ethics in health care. Physicians are professionals with wide discretion in diagnosing and treating diseases. In making medical decisions, a physician's professional duty to the patient could be in conflict with his or her own interests (e.g., income, promotion, and social status). Medical ethics such as the Hippocratic Oath were established to instil ethical standards for physicians' medical practices. The latter is a guide for professional behaviour. Enforcement of these ethical practices was often the role of organized medicine such as the Medical Council in the United Kingdom. However, the Chinese system encouraged physicians to be profit seekers at the expense of patients. The loss of medical ethics is a fundamental cause for prescribing unnecessary tests, drugs, surgeries and hospitalization in China. As China tries to reverse course, but it is discovering that once medical ethics have been eroded, restoring them is a herculean task. There is a valuable lesson here for the rest of the world.

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