China's Health Care Reforms: Universal Coverage and Issues of Fiscal Sustainability and Equity

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ABSTRACT: Since the late 1990s, Chinese government has undertaken numerous reforms to build basic health care insurance coverage for its people. By now, it is marching toward the goal of universal coverage. However, China is still facing big challenges in making its system efficient, equitable, and fiscally sustainable. While China and its government have dramatically increased health care expenditure in the last decade, is the system fiscally sustainable, and its service equitable? This paper attempts to address these two questions. First, the author will review the major reforms aimed to extend basic health care insurance coverage for different groups of the population. Then the author will use data from *Year Book of Chinese Health Care Statistics 2011* and *2013* and existing literature to examine the issues of fund sustainability and equity in China's health care system.

Key words: Urban Employment Basic Health Insurance System, New Rural Cooperative Medical Service, Urban Resident Basic Medical Insurance, Chinese Government role in health care, Equity of Chinese health care, Fiscal sustainability.

Introduction

As China has become affluent and urban, and its population has aged, its health care system will play a critical role in determining the life quality of its huge population and the economic development and social stability of the nation. In the past four decades, Chinese government has undertaken constant efforts to reform its health care system. The efforts reflect not only the demand of the economic reforms but also the government searching for an appropriate role in providing basic health care for its citizens.

Among China's numerous reforms are those to build basic health care insurance coverage so that people have access to affordable care. By now nearly all the people are covered by one of the three major health care insurance systems. China is marching towards the goal of universal coverage. However, China is still facing big challenges in making its system efficient, equitable, and fiscally sustainable. While China and its government have dramatically increased health care expenditure in the last decade, is the system fiscally sustainable, and its service equitable? This paper attempts to address these two questions. First, the author will review major reforms aimed to extend basic health care insurance coverage for different groups of the population. Then the author will use data from *Year Book*

of Chinese Health Care Statistics 2011 and *2013* and existing literature to examine the issues of fiscal sustainability and equity in China's health care system.

Reforms to Extend Basic Health Insurance Coverage

As a large nation, it is always a daunting task for Chinese government to provide its huge population with the access to basic health care. **I**n the first three decades after the People's Republic of China was founded, around 80% of China's population lived in rural area where "barefoot doctors" delivered rudimentary but accessible health care services under the Rural Cooperative Medical Service (农村合作医疗) (Eggleston 2012). Meanwhile, the majority of the small urban population enjoyed one of two publicly funded systems. Labor Insurance System (LIS) （劳保医疗） paid the medical expenses of the workers and their dependents who work in state-owned enterprises and collectively-owned businesses. Government Employee Insurance Scheme (GEIS) （公费医疗） funded by government general revenue covered the medical costs for all employees in government, academia, and political institutions, college students, and military personnel and their dependents. At the end of the 1970s, LIS and GEIS covered 137 million urban people, or 75% of the urban labor forces (Guo 2003).

In 1978, China started its economic reform. Though health care was not a concern, its reform soon became inevitable. The systems were plagued with runaway costs because neither individuals nor institutions had incentives to save. Abuse of the systems was widespread. For example, in 1997, the total health care spending was 77.4 billion RBM, 20% – 30% of which was estimated to be unreasonable and unnecessary (Guo 2003).

While the need to contain cost was obvious, the underlying forces that necessitated the health care reform came from the ongoing market system. Two institutional factors were critical to the reform (Gu and Zhang 2006). First, as hospitals were given more financial autonomy as part of economic reform, they often overprescribed expensive medications and tests to increase their profit (Gu and

Zhang 2006). During 1978-1997, health care cost rose 28 times, much faster than inflation and economic growth (Guo, 2003). Second, as the state-owned enterprises were transformed into market place, the workplace-based free health system became incompatible. The financially struggling enterprises could not afford welfare benefit, including health care (Gu and Zhang 2006). Many people were laid off and lost their health care coverage completely (Guo 2003). There was little or no health care coverage for those who were self-employed and who worked for emerging private sector. The wide loss of health care coverage combined with the rising health care cost led to the public to outcry that "seeing a doctor is difficult and expensive" (看病难，看病贵) (Li, Chen and Powers 2012). Therefore, expanding health care coverage to this ever-increasing group of urban population was no longer an economic issue but a political issue. If not addressed, it "could jeopardize the entire economic reform and stability of the regime" (Guo, 2003 p.388).

The Urban Employee Basic Health Insurance System (UEBHIS) (城镇职工其本基本医疗保险)

The early reform efforts attempted to control costs. As early as the 1980s, co-payment was used for some health services. Measures were taken to control medicine prices and reimbursement rates for certain kinds of health care services and drugs (Guo 2003; Gu & Zhang 2006). A more fundamental change came with the Urban Employee Basic Health Insurance System (UEBHIS) launched in 1998. UEBHIS builds into it a social insurance mechanism, replacing the workplace–based health care systems with the following characteristics.

1. Wide coverage: It consolidates the LIS and GEIS into one program. All urban workers either in the public sector or the newly emerged private sector are mandated to join (Guo 2003). Dependents are not covered.

2. Fund Structure: It is a social-based insurance fund where both individuals and enterprises contribute. Employers' share is 6% of the total payroll, and employees' share is 2%. There are both

individual accounts and a social pooling account. All employees' contribution and about 6% of employers' go to the individual accounts called individual medical saving account (MSA). The remaining goes to the social pooling accounts referred to as social risk pooling (SRP) (Guo, 2003; Liu, 2002).

3. Benefit structure: MSA will be used to pay for outpatient services. If MSA is depleted, enrollees will have to pay out of pocket. Any savings will go to the next year or to the children if one passes away. SRP will pay for the inpatient services after the deductible up to 10% of the local average annual wages. The ceiling of SRP is 400% of the local annual wages (Liu, 2002).

4. Governance and management: While the Central Government sets the basic policy guidelines, local governments (e.g., cities or counties) manage their own systems. City and counties set up their social insurance bureaus responsible for collecting premiums, contracting, and payment for services. The risk is pooled at the local level. Any deficits will be covered by the local governments (Guo, 2003; Liu, 2002).

UEBHIS is the first major reform to expand basic health care insurance coverage. The new system relies on social risk pooling funded by employees and employers. This represents a fundamental change of reducing government role in health care service. Though the program is mandatory, its enrollment takes years. Among the employers that are slow to sign on are the private organizations. By 2006, UEBHIS covered 64% of the urban employed population, but only 31% of the total urban population (Eggleston, 2012).

Urban Resident Basic Medical Insurance Program (URBMI) (城镇居民基本医疗保险)

Even with 100 percent enrollment, UEBHIS still left out a great number of urban non-working residents (Liu and Zhao 2012). Any serious illness would bring the family into poverty. The SARs outbreak in early 2003 brought more attention to the health care reform (Barber and Yao 2010). At about the same time, Chinese President Hu Jingtao, and the Central Government called for building a

harmonious society. Extending basic health care coverage to the urban unemployed residents became part of the efforts. The Urban Resident's Basic Medical Insurance program (URBMI) was piloted in seventy-nine cities in 2007, and by the end of 2009, nearly all cities had implemented it.

The URBMI is a government-run insurance program covering any urban residents without former employment. Enrollment is voluntary. The participation unit is at the household level. These arrangements avoid the high cost associated with mandatory enrollment and eliminate the adverse selection of individuals. The Central Government provides general guidelines and gives each province, county, or city a great deal of discretion to design and to implement its own program (Liu & Zhao, 2012).

The program is mainly funded by individual contributions and government subsidies. Individual contributions varies from city to city. In general it is lower than the UEBHIS premium but higher than that of the New Rural Cooperative Medical Service (NCMS). Subsidies come from the local government and the Central Government. Local governments' subsidies for each participant vary depending on the affluence of the area (Liu and Zhao 2012). Central government's subsidies are higher for poor regions and for poor residents (Liu & Darimont 2013; Barber & Yao 2010). In 2007, the average premium for the pilot cities was RMB 236 for adults and RMB 97 for children. About 36% of the former and 56% of the latter come from government subsidies (Liu and Chao 2012). It is clear that in URBMI the government reasserted its role in financing health care service to its people.

As one of the URBMI's major goals is to eliminate impoverishment caused by big medical bill, the program covers inpatient service and outpatient services for chronic and fatal diseases such as diabetes and heart disease. The inpatient reimbursement rate is much higher than outpatient services (Lin, Liu & Chen, 2009).

New Rural Cooperative Medical Service (NCMS) （新型农村合作医疗）

In rural areas, great changes have also taken place over the decades. Under the market-oriented economic reform, land responsibility was assigned to individual farmers in the early 1980s. Collective communes were dissolved and the basis of the rural health care system collapsed. This left the large rural population with no access to health care. Any serious illness would bring the whole family into poverty or the patients would go without seeking any treatment. If not addressed, the issue would impose a serious threat to the social stability and economic development of the nation (Li, Hou, Sun, Lu, Wang, Li, Chang, and Hao, 2015).

In 2003 the New Rural Cooperative Medical Service (NCMS) was born as a government-run voluntary insurance program. Unlike the traditional rural medical program which was directed and funded by the commune and its revenue, NCMS is guided and subsidized through all levels of governments (Liu & Darimont, 2013; Li, Hou, Sun, Lu, Wang, Li, Chang, & Hao, 2015). Participants are required to contribute, starting with a minimum of RMB 20 initially. Government subsidies were RMB 20 in 2006, increasing steadily every year. Fund raised per capita reached to RMB 150 in 2010, RMB 308 in 2013 (*Year Book of Chinese Health Care Statistics 2013*). The funds are used to cover inpatient services and outpatient treatment for specific chronic illnesses.

The Medical Financial Assistance (MFA) Program （医疗救助）

In addition to the three programs, Chinese government also piloted the Medical Financial Assistance (MFA) during 2003 - 2005 and then implemented it nationwide in 2006 in the rural area, and in 2008 in the urban area. The goal is to provide financial assistance to poor residents for a series of health services. The fund can be used to cover the cost for an increasing number of diseases, to pay medical services beyond the basic health service package, and to pay the premiums to increase participation in NCMS and URBMI. By the end of 2009, the program had assisted 93.37 million poor residents, one third of whom were poor urban residents (Barber & Yao, 2010; Wang, 2014). The fund

comes from all levels of government. Over the years, the share of Central Government has increased. By the end of 2009, the total fund from all levels of government was more than RMB 36.74 billion. The average annual growth rate was 55% during 2005-2009 (Barber & Yao 2010).

Table 1 is a summary of the three health care insurance systems. The three systems together with MFA have set the framework to provide basic health care to different groups of China's population. This basic medical care insurance covers the standard diagnostic and treatment services and the designated prescriptions with certain reimbursement rates. As shown in Table 1, UEBHIS has the highest benefit ceiling and reimburse rate. NCMS and URBMI received government subsidies while UEBHIS does not.

Table 1: A Summary of the Three Major Health Plans

Characteristics	Urban Employee basic Health Insurance System (UEBHIS)	Urban Residents-basic Medical Insurance (UR-BMI)	New Rural Cooperative Medical Scheme (NCMS)
Year started	1998 (piloted in Zhenjiang and Jiujiang)	2007 (88 pilot cites) 2008 (317 pilot cites) 2010 Target-all cities	2003 (304 pilot counties)
Targeted population	Urban employed (Est. 300 million)	City residents unemployed (est. 420 million)	Rural residents (Est. 840 million)
Administration	Municipal level	Municipal level	County level
Participation	Mandatory for individuals	Voluntary at household	Voluntary at household
Benefit Coverage	Inpatient & outpatient treatment/co-payment subject to deductible, benefit cap, and reimbursement rate	Inpatient treatment and treatment of chronic illnesses subject to deductible, benefit cap, and reimbursement rate	Inpatient treatment and treatment of chronic illnesses subject to deductible, benefit cap, and reimbursement rate
Reimbursement rate Ceiling as of 2008	72% 100,000 RMB	50% 80,000 RMB	40% 20,000 RMB
Sources of funding	Employers' & employees' contribution	Individual contribution & government subsidies	Individual contribution & government subsidies

Sources: Barber & Yao, 2010; Liu & Darimont, 2013; Meng & Tang, 2010.

Further Health Care Reforms

During the past half century, Chinese government has taken two different approaches to reform health care service (Liu & Darimont, 2013; Du, Liang, Zhang, & Liu, 2014). In the early years (e.g., during 1980s – early 2000s) Chinese government attempted to reform by introducing market mechanisms into the health care sector. Public hospitals were granted autonomy so that they could find ways to make profits to substitute for the decreased government funding (Du, Liang, Zhang, & Liu, 2014). The design of UEBHIS exemplifies this philosophy with the use of social risk pooling.

In the early 2000s, when the public outcry of "seeing a doctor is difficult and expensive" got even louder and when China had a disastrous response to SARs, China's leaders had to reassess the ultimate goal of China's ongoing economic development and reconsider the role of government in health care. **A report issued by State Council criticized the previous reform harshly, labeling it a failure**. The deliberation ended with an emerging consensus that health care is public goods, and the government, not the market place, should take the major responsibility (Li, Chen, & Powers, 2012; Du, Liang, Zhang & Liu, 2014; Tam, 2011). In URBMI and NCMS, government has reasserted its role in health care finance. Reflecting this philosophy, the Chinese government launched a new wave of health care reform in 2009. The overall goal is to "establish a universal basic health care system, which will provide secure, efficient, and affordable healthcare services by 2020" (Li, Chen, & Powers, 2012, p. 633).

In its initial implementation stage (2009 -2011), the 2009 effort aims to reform the basic healthcare system with five distinct targets of "coverage, primary care, pharmaceutical delivery and regulation, public hospital reform and the public health system." (Li, Chen, & Powers, 2012, p. 633). In the next two years, governments at all levels spent RMB 850 billion on health care reform, nearly 40% from the Central Government (Barber & Yao 2012; Eggleston 2012). Half of the total amount was used

to subsidize individuals to participate in NCMS and UEBMI in order to obtain universal coverage by 2020. This has resulted in the great increase in enrollment, as shown in Table 2.

A primary care system is essential for an efficient and accessible health care system. Traditionally good health care institutions are in cities. Patients and their families usually have to travel to seek medical treatment. Not only do these hospitals get over-crowded, making it hard for people to see a doctor, but also create a great deal of waste in time and money. In the 2009 reform, Chinese government seeks to restructure the health care system by establishing a primary care system. RMB 60 billion were allocated to build 33,000 new hospitals and health care centers in undeveloped areas and to train doctors. Government also provides subsidies to pay steady salary for doctors and other workers so that they will concentrate on service not on revenue making (Li, Chen, & Powers, 2012).

To contain runaway hospital fees and to eliminate medicine-subsidized healthcare, the new reform launches a catalog of essential medicine and requires medicine procurement through an auction-based mechanism. Over 307 types of medicine are designated as essential medicine which must be sold at the buying prices. Comprehensive public hospital reform is also piloted to change its revenue-generating incentives from overutilization to competitive work environment that rewards high performances. The new wave of reform also puts emphasis on public health education and prevention. Free services and medicine are also provided for certain diseases (Li, Chen, & Powers, 2012).

Toward Universal Coverage and Deepening the Reform

Eggleston (2012) suggested that "China overall achieved its five articulated goals" (p. 9). This particularly true with its goal of reaching universal coverage. In 1998, only 52% of the urban population and 4.7% of the rural population had basic health care coverage (Meng & Tang, 2010). The establishment of the three programs have greatly expanded coverage. As shown in Table 2, the enrollments of programs increase rapidly, substantially due to generous government subsidies,

especially since 2009. The total enrollment number jumps from 1.133 billion in 2008 to 1.34 billion in 2012 (See the last column in Table 2). Enrollment rate for NCMS jumped from 91.5% in 2008 to 99% in 2013. According to Li, Chen, & Powers (2012) and Eggleston (2012), by 2011, 95% of all population was covered.

Table 2: Number of Participants of the Three Programs during 2005 -2013 (in millions)

Year	URBMI*	UEBHIS*	Total URBMI & UEBHIS participants	NRCMS (participation rate in percentage)	Total Enrollments
2005		137.83		179 (75.66%)	316.83
2006		157.32		410 (80.66%)	567.32
2007	40.68	180.20	220.88	730 (86.20%)	950.88
2008	118.26	199.96	318.22	815 (91.53%)	1,133.22
2009	182.10	219.37	401.47	833 (94.19%)	1,234.47
2010	195.28	237.35	432.63	836 (96.00%)	1,268.63
2011	221.16	252.27	473.43	832 (97.48%)	1,305.43
2012	271.22	264.67	535.89	805 (98.26%)	1,340.89
2013	n/a	n/a	n/a	802 (99.00%)	n/a

Sources: *Year Book of Chinese Health Care Statistics 2013*。《2013 中国卫生统计年鉴》*Year Book of Chinese Health Care Statistics 2011* 《2011 中国卫生统计年鉴》

*The participation rates are not provided in *Year Book of Chinese Health Care Statistics 2013*.

In more recent years, Chinese government has taken more measures to deepen the reform, making more progress toward the five targets and its long-term goals. For instance, China has enhanced benefits by providing free medical services to twenty-two serious diseases like childhood leukemia, congenital heart disease, childhood phenylketonuria and hypospadias. (Wang, 2014; National Health and Family Planning Commission of the PRC, 2014).

Funding for China's health care System

Table 3 shows health care spending over the decades. The total resources for health care and total government health care expenditure have increased rapidly and continuously. By 2013, the overall health care expenditure was RMB 3.187 trillion, 5.57% of China's GDP, an 81.7% increase over 2009. The overall expenditure comes from three sources: governmental fund, social insurance fund, and individual

contributions. In 2013, 30.1% comes from the government; 36.0% from social insurance fund; and 33.9% from individuals.

Chinese government's responsibility to fund the health care system changes over time, reflecting overall governmental policy change and its search for an appropriate role, as mentioned earlier. Under the planned economy system, government was responsible for health care provisions and paid all the medical expenses. With the market-oriented reform in 1979, the traditional system gave way to social insurance, and other market mechanisms were built into the health care system. After the UEBHIS was established, the share of government spending reached to the lowest point of 15.5% of the total health care spending in 2000 because UEHIS shifts cost to employees and employers.

With government shifting its policy priorities toward social development and reasserting its role in health care provision, government of all levels starts to increase its investment in health care. Government provides a huge amount of funds as premium subsidies to encourage the participation of NCMS and UEBMI and to build hospitals and to subsidize health care providers. As shown, government has doubled its share during 2000-2012 from 15.5% to 30%. The individual share changes in the opposite direction of government share. It was almost 60% of the total cost in 2000, and then started to shrink. According to Fang (2016), the out of pocket cost has sharply declined from an average annual growth rate of 33.11% during 1990-2000 to 11.84% after 2000 for urban residents, and from 19.79% to 8.54% for rural residents.

Table 3: Health care cost (in millions of RMB) in selected years

Year	Total cost		Government share		Social share		Individual share	
	RMB	% GDP	RMB	% of total cost	RMB	% of total cost	RMB	% of total cost
1980	1430	3.15	519	36.2	609	42.6	303	21.2
1985	2790	3.09	1076	38.6	919	33.0	793	28.5
1990	7473	4.00	1872	25.1	2931	39.2	2670	35.7
1992	10968	4.07	2286	20.8	4315	39.3	4367	39.8

1994	17612	3.65	3422	19.4	6449	36.6	7740	43.9
1996	27094	3.81	4616	17.0	8756	32.3	13721	50.6
1998	36787	4.36	5900	16.0	10710	29.1	20176	54.8
2000	45866	4.62	7095	15.5	11719	25.6	27051	59.0
2002	57900	4.81	9085	15.7	15393	26.6	33421	57.7
2004	75902	4.75	12935	17.0	22253	29.3	40713	53.6
2006	98433	4.55	17788	18.1	32109	32.6	48535	49.3
2008	145354	4.63	35939	24.7	50656	34.9	58768	40.4
2010	199803	4.98	57324	28.7	71966	36.0	70512	35.3
2011	243459	5.15	74641	30.7	84164	34.6	84652	34.8
2012	278468	5.36	83659	30.0	99163	35.6	95645	34.4

Source: The Year Book of Chinese Health Care Statistics 2013。《2013 中国卫生统计年鉴》

Issues of financial sustainability and equity

With its various health care reforms, China has accomplished a great deal. It has extended basic health care coverage to nearly all its people. With the ever-increasing social resources and government resources committed to the system, individual burden has been reduced and disease-induced impoverishment has declined (Fang 2016). Yet, China health care system is still facing big challenges.

Issue of fiscal sustainability

The literature on China's health care has always recognized the great fiscal strains that the health care system placed on economy, government, and individuals. The start of the reform in the early 1980s was directly prompted by runaway health care costs. Seeing a doctor is [always] expensive and hard for the general public. The current systems are witnessing the rapid health cost growth, thus raising the issue of how sustainable the system is.

Table 3 shows that the overall cost for health care has increased rapidly in the past few decades. During 2006 – 2012, the cost tripled. If we look at Table 4, we will see a disturbing trend. In seven out of the thirteen years, the annual health care cost increases at a larger rate than GDP growth rate. This is especially true in the recent years when China's economy growth slows down and the annual GDP growth rate gets smaller. At the same time, the annual health care cost grows at a faster

rate. During 2000 – 2012, the average annual growth rate for GDP is 13.5%, and for health care cost 14.9%. For more recent years (i.e. 2009- 2012), average GDP annual growth rate is 13%, while the total health care cost grows at an average rate of 17.7%, 1.36 times faster than China's GDP growth rate. If healthcare cost is not contained, it will create a big burden for the economy.

The rapid health care cost increase comes from both demand side and supply side. On the demand side, several pressures are present: expanded health care coverage and reduced out of pocket cost, public expectation of good health care, aged population, and incentives built in the basic health care programs. For instance, many people seek inpatient services when not necessary because inpatient services have a higher reimbursement rate (Barber and Yao 2010). On the supply side, health care providers still tend to overutilize and overprescribe. These behaviors are not regulated by the three basic health care coverage policies. Even though the 2009 reform seeks to reform hospitals, it still takes years to see the effect. In addition, the pharmaceutical industries are still pushing up the health care cost. The high cost is also contributed by inefficiency and waste associated with health care services (Barber & Yao 2010).

As stated earlier, government has increased its share constantly and greatly in the past decade. This is a positive change as it reduces individual cost share. Yet, resources possessed by government is not unlimited, and rapid health care cost growth can impose a big challenge to government budgets like what is happening in the United States. When examining Chinese government health care expenditure annual growth rate in relation to total government revenue annual growth rate, we see the former has a larger growth rate in several years, and more often in the recent years (See Table 4). This reveals the danger that dramatic increase of government health care expenditure may eat away other government spending responsibilities over time, if left unattended.

Table 4: A Comparison of Annual Growth Rates (In Current Price) during 2000-2012

Year	China's GDP Annual Growth Rate	Total Health Care Costs Annual Growth Rate	Government Health Care Spending Annual Growth Rate	Government Revenue Annual Growth Rate
2000	10.6%	13.3%	10.7%	17.0%
2001	10.5	9.5	12.8	22.3
2002	9.7	15.2	13.5	15.4
2003	12.9	13.7	22.9	14.9
2004	17.7	15.2	15.8	21.6
2005	14.6	14.1	20.0	19.9
2006	15.7	13.7	14.6	22.5
2007	21.4	17.6	45.1	32.4
2008	22.1	25.6	39.2	19.5
2009	8.6	20.7	34.0	11.7
2010	17.8	13.9	19.0	21.3
2011	17.8	21.8	30.2	24.9
2012	9.8%	14.4%	12.0%	12.8%

Source: Author's calculation based on data from *Year Book of Chinese Health Care Statistics 2013*。《2013 中国卫生统计年鉴》

At the program level, the alarms are sounding. According to Fang (2016) the three health care systems are threatened with serious looming funding deficits. Recent slower economy growth rate means a smaller raise of workers' pay. As the UEBHIS fund contribution is set at a percentage of the workers' salary, the growth rate of UEBHIS fund will slow down. At the same time, the future will witness UEBHIS expenditure growing at a faster rate due to rising health care cost as explained above. For instance, during 2000 - 2013 UEBHIS contribution grew at 33.2% every year, but its expenditure at 34.39%. If this trend is not reversed, Fang (2016) warns that UEBHIS will have budget deficit by 2017. The debt by 2024 is projected to be RMB735.3 billion. The New Rural Cooperative Health Care System is also facing the same issue. As early as 2010, Barber and Yao (2010) indicate that NCMS fund had not been sufficient to provide the published level of benefit to the recipients. They cited various studies that documented a large gap between the published and actual reimbursement rates due to the insufficient funding. Fang (2016) warns that by 2017 the fund balance is predicted to run deficits, and by 2020 the fund annual expenditure will be 15.38% over its annual contribution.

Eggleston (2012) states that the voluntary and mandatory social insurance systems are the special features in China's health care system. Social insurance systems can enrich the benefit package and spread the cost among members and reduce the pressure on government and individuals. The problem is that the current social pooling is at the local level and for different groups. The scale is too small to reach its potential. Some local funds run deficits. Others have huge surplus in both MSA and in the risk pooling account. Both cases are problematic. In the former case, the fund fiscal sustainability is threatened. In the latter case, individuals are over charged and overburdened (Wang, 2014).

Issue of Equity

Inequity in China's health care has garnered a great deal of attention. For instance, the World Health Organization (WHO) 2000 Report ranked China near the bottom among the 191 countries because rural residents in China had to bear all or near all health care costs on their own (Yi, Maynard, Liu, Xiong, & Lin, 2005). In a 2008 interview, the Chinese Health Minister then, Chen Zhu, stated that "the most pressing concern is with delivering on its principle of equalization of access to public services" (Cheng, 2008, p. 1104). That means Chinese government would make effective system changes so that everyone in China could enjoy equitable and universal basic health care and medical services.

With all the reforms, the lack of equity is still striking with China's health care services. First, Wang (2014) states that the reforms fail to extend basic health care to those who need them most, including town enterprises workers, migrant workers, private and small business workers, the laid off workers of the bankrupted state owned enterprises, and those who do not have regular jobs. They do not have a working unit to contribute to their UEBHIS, nor can they afford the premium themselves. The estimated number of those that have no health care coverage is 260 million, and of whom about 120 million are migrant workers.

Second, the basic health care systems are fragmented (Wang, 2014). There are large disparities in terms of distribution of burdens and benefits among groups, due to the designs of the three different systems as shown in Table 1. One group that has been particularly negatively affected by the fragmented system is the migrant workers. They can enroll in NCMS, but may not have easy access to health care when they need. Regarding burden distribution, UEBHIS does not receive government subsidies, while the other two programs do. In term of benefit, the coverage for outpatient costs and the reimbursement levels are different among the three plans and across cities. These disparities are intensified by the fact that the funds are administered at the local level. Third, related to the second point, social risk pooling at the local level intensifies the uneven distribution of cost and benefit. Even within the same region the affluence of the localities affects the health care service as the programs are administered by county or municipal governments (Wang, 2014).

The inequity is also seen in the different levels of heath care resources available in different regions. The East and West have more resources than the Central region. The East has well-developed economy, and the West has higher level of Central Government subsidies. For instance, in 2013, the annual government subsidies are RMB 312 in the East; RMB 213 in the Central; and RMB 331 in the West. These disparities will lead to unfair distribution of health care resources and affect health outcomes (Fang 2016).

When looking at the overall health care expenditure per person, we see the big disparities between urban and rural areas, as shown in Table 5. The expenditure per urban resident is often two to three times higher, with the largest gap appearing during 2000-2008. Over the period of 1990-2012, the overall health care expenditure per capital growth rate is 4,000% for urban residents, 1.5 times larger than that for rural residents. The data do show that the gap is narrowing, as seen by the smaller ratio since 2010. The growth rate for rural residents per capita is larger since 2005 than that for urban residents. This is partially due to the large government subsidies to rural residents.

Table 5: Health Care Expenditure Per Person: Urban v. Rural in Selected Years

Year	Urban Health Care Expenditure Per Person	Rural Health Care Cost Per Person	Urban Rural Ratio
1990	25.7	19	1.35
1995	110.0	42.5	2.59
2000	318.1	84.6	3.76
2005	600.9	168.1	3.57
2008	786.2	246.0	3.19
2009	856.4	287.5	2.98
2010	871.8	326	2.67
2011	969.0	436.8	2.22
2012	1,063.7	513.8	2.07
Growth Rate During 1990 -2012	4,000%	2,600%	n/a
Growth Rate During 2005-2012	77%	200%	n/a

Source: *Year Book of Chinese Health Care Statistics 2013,* p. 113.《2013 中国卫生统计年鉴》. The last column and the last two rows are author's calculations.

According to Fang (2016), there is still a large disparity among different regions in terms of the residents' health. Those who live in the East and economically developed regions enjoy a life expectancy of 78 years old in 2010, while life expectancy for those who live in the West and less developed region is younger than 70 years old. The infant mortality rate for urban areas is 5.2%, but 11.3% for rural areas.

Conclusion

China's government has successfully extended basic health care coverage to nearly all of its population, and is making more comprehensive efforts to deepen reforms and broaden benefits. However, the Chinese health care system continues to face problems in providing efficient, affordable, and equitable health services. Behind the dramatic increase of China's health care expenditure lays the threat to the system's fiscal sustainability. The disparities among different groups and regions are still wide spread and striking.

One proposal to address disparities is to integrate the three systems into one (Ren, 2014). No matter where one lives, the person should receive basic health care. Piloted programs are implemented

in cities such as Chengdu and Hangzhou. The city governments provide the same amount of subsidies, the same benefit, and the same pooling level for both rural and urban residents (Ren, 2014). When the systems are integrated, disparities will be reduced and resources will be better utilized. A related proposal is to raise the social risk pooling from the local to a higher level - first to district level and then to the province level. This way, pooling can be more effective to gather resources, spread the burden among members, and reduce inequity.

To contain health care costs, several measures should be taken. The system should improve its efficiency by continuing to strengthen primary care system and raising clinical quality, by emphasizing public health and disease prevention, and by reducing waste and fraudulence in the administration. Improving health care quality at the local level requires training and retaining good general doctors who need incentive in their admission, license, and benefits. Further actions can be taken to control the prescription prices through both government regulations and other market mechanisms. Further measures should be directed to improve health care providers' incentives for better performance and services. While China has accomplished a great deal in improving its health care systems, it still has a lot to do to obtain its goal of providing efficient, affordable and equitable health care for all its citizens.

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