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State extractive capacity, policy orientation, and inequity in the financing and delivery of health care in urban China

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改革以后，中国政府在承担卫生保健职能方面的意愿和能力发生了变化，本文考察了这些变化对城镇卫生保健筹资和服务公平性的影响。文章着重分析了两个相关问题：在多大程度上，卫生保健的筹资具有累进性？在多大程度上，医疗服务的利用是公平的？第一节解释为什么在改革开放期间中国政府承担卫生保健的意愿与能力都有所下降，并探讨这些变化对卫生总费用的结构产生了什么样的影响。接下来的两节分别对中国城市卫生保健筹资和服务利用的不平等程度进行了实证分析。第四节进一步指出，筹资与服务方面的不平等将本来就处于弱势的社会群体置于更加不利的地位。总之，以市场为导向的卫生体制改革不但没有解决医疗费用上涨问题，反而加剧了这一问题；它因此损害了卫生保健筹资的公平性，降低了弱势人群对卫生服务的获取，增加了因病致贫的几率。

关键词： 卫生保健 健康不平等 市场化改革

This paper explores how the Chinese government's reluctance/inability to invest in health has influenced the performance of its health system in the context of urban China. It focuses on two related issues. To what extent is the financing of the health care system progressive? To what extent is the utilization of health care services equitable? Section I explains why the Chinese government has become less willing and able to bear the burden of health care during the era of economic reform and inspects the impacts of these changes on the structure of overall health expenditure. The following two sections empirically examine the extent to which the shift toward out-of-pocket spending has made health care less accessible and less affordable for the poor and vulnerable. Section IV explores how inequity in health care and health services has put groups of people who are already socially disadvantaged at more disadvantaged positions. The study finds that the market-oriented health reform in urban China has exacerbated the cost problem that it intended to solve, reduced access to health services for the most vulnerable, and increased the instances of illness-induced poverty.

Keywords: health care, health inequality, market-oriented reform

China embarked on market-oriented reform in 1979. Since then, the size of its economy has expanded by 10 fold[1] and the living standard of its people has improved markedly. The rapid growth of real per capita income has substantially increased the total resources available in the country to pursue better health for all citizens. When we examine China's health performance, however, the picture does not appear to be as thrilling as the GDP/health spending growth. Though life expectancy continues to grow and child mortality rate continues to drop, the progress

1 National Bureau of Statistics of China, *China statistical abstract 2005*, p. 22.

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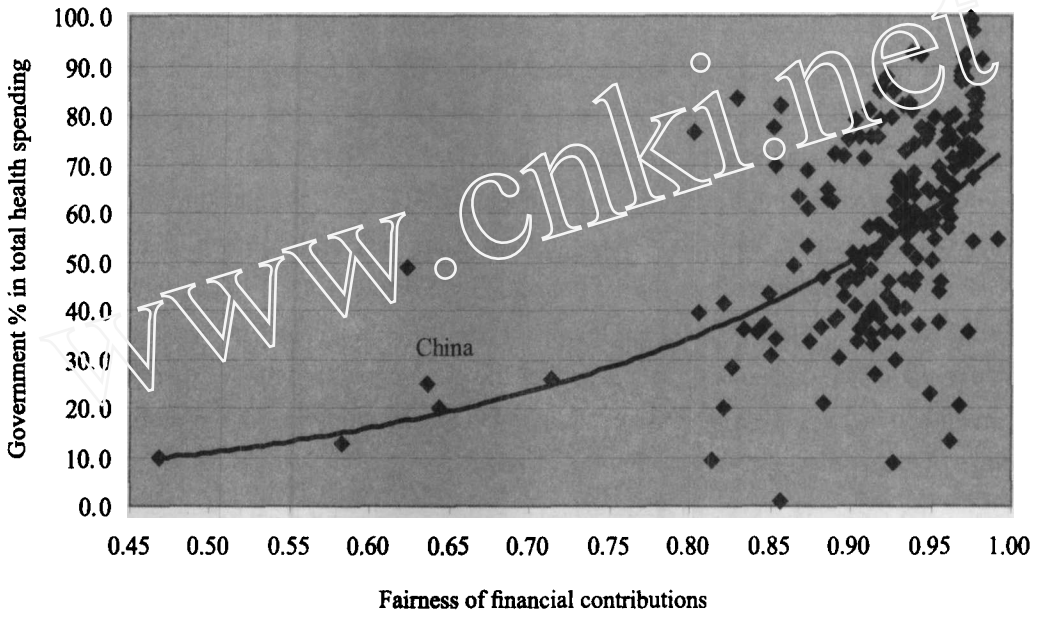
http://www.informaworld.com

has been slow in comparison with other countries.[2] A leading policy think tank directly under the State Council recently admitted that the country's health reform in the last two decades had been a "failure."[3]

Figure 1. Fairness of financial contribution and government share in total health spending



Source: WHO, *World health report 2000*, Annex, Tables 7 and 8.

Why, with higher per capita disposable income, better nourishment, and a bigger proportion of its national income devoted to health care, has China's health system performance been so disappointing during the reform era? Determinants of health outcomes are of course multifarious, encompassing social, cultural, economic, and other factors. This article examines only one of the possible culprits, the government's reluctance/inability to spend on health. As Figure 1 illustrates, cross-nationally, smaller shares of government expenditure in total health spending are commonly associated with less fair distributions of the financial burdens of health care, which in turn is likely to produce poor health outcomes.[4]

More specifically, this paper explores how the Chinese government's reluctance/inability to invest in health has influenced the performance of its health system in the context of urban

2 Shaoguang Wang, "China's health system: from crisis to opportunity," pp. 5-50.

3 Project Team of DRC (2005), "An evaluation and recommendations on the reforms of the health system in China," pp. 39, 195.

4 For instance, based on the data from selected countries in the *World health report 2000*, Weiching Chang (2002) identifies a significant positive correlation between life expectancy and fairness of financial contribution and financial risk protection ($r = 0.622$, $p = 0.001$).

China.[5] Any health system has two key functions: the generation of resources and the provision of services. Ideally, health care ought to be financed according to an individual's ability to pay and provided according to need. A system that distributes health care according to one's ability to pay is not only unfair but also may deprive the poor of necessary health protection, which ultimately could harm the nation's overall health status. For this reason, we will focus on two related issues: To what extent is the financing of the health care system progressive? To what extent is the utilization of health care services equitable? Section I explains why the Chinese government has become less willing and able to bear the burden of health care during the era of economic reform and inspects the impacts of these changes on the structure of overall health expenditure. Based upon three National Health Services Surveys (1993, 1998, 2003),[6] the following two sections empirically examine the degree of inequality in health care financing and delivery in urban China. They show that the market-oriented health reform in urban China has reduced access to health services for the poor and vulnerable. Section IV explores how inequity in health care and health has increased the instances of illness-induced poverty. To redress these problems, the concluding section suggests that the government must alter its policy orientation and strengthen its extractive capability so that it can play a major role in reestablishing universal coverage of essential health services for all citizens.

I. Changing structure of overall health expenditure

In the period of Mao Zedong, China placed great emphasis on egalitarian principles. From 1950 through 1979, the government made enormous efforts to establish a health care system that could provide all citizens with access to basic health services at an affordable price. On the eve of the economic reform, two schemes, namely, the Government Insurance Scheme (GIS) and the Labor Insurance Scheme (LIS), covered virtually all urban residents. GIS was financed and administered by governments at various levels, while LIS was financed and administered by individual enterprises. Theoretically, both GIS and LIS were self-insurance schemes with no risk pooling across localities or work units, which implied that medical benefits might vary vastly from region to region and from enterprise to enterprise. In reality, however, no such differences existed prior to the economic reform, because, thanks to "soft budget constraints" under the planned economy, the central government served as the payer of last resort for all outstanding health bills and the whole system functioned as if there were a nationwide pool.[7] Although

5 We focus on urban China rather than the whole of China for a simple reason. China's two-pronged health care system distinguishes urban from rural health care finance and delivery. The two sectors differ so significantly that it is almost impossible to do an adequate analysis of both in a single article.

6 Ministry of Health has conducted three national health services surveys at intervals of five years (1993, 1998, and 2003).

7 G. Henderson, *et al.*, "Distribution of medical insurance in China," pp. 1119–1130; C. Grogan, "Urban economic reform and access to health care coverage in the People's Republic of China," pp. 1073-1084; W. Yip, & W. Hsiao, "Economic transition and urban health care in China: impacts and prospects"; Y. Liu, "Reforming China's urban health insurance system," pp. 133-150; Project Team of DRC, "An evaluation and recommendations on the reforms of the health system in China," pp. 1-259.

the quality of services was relatively low at the time, the pre-reform system enabled China to achieve enviable improvement in people's health at a low level of economic development.[8]

1. Changes in government policy orientation and extractive capacity

The urban economic reform which started around 1984 has since transformed the foundation of China's urban health care in a profound way. Here two parameters are crucial. One is the government's policy orientation, which influences its willingness to finance health care; and the other is the government's extractive capacity, which influences its ability to finance health care.

Underlying the reform was a paradigm shift in ideology. Rather than equity and security, Chinese policy-makers now placed top priority on rapid aggregate economic growth. The obsession with the fastest possible GDP growth rates made them ready to tolerate a certain degree of inequity and to sacrifice some basic human needs, including health care. It was their belief that, as long as the "pie" continued to grow, all other problems would eventually be solved. Although the government never openly stated that health was not important, its way of allocating public funds revealed that health was not a priority. As a proportion of GDP, government health spending had increased from the early 1950s through the 1970s, and reached its historically highest level in 1983. After urban reform began, however, although government health spending still grew in the absolute amount, it experienced a freefall relative to GDP in much of the 1980s and 1990s.[9]

Ideological shift aside, the economic reform also critically enfeebled the government's ability to deliver social welfare even if it so desired. At the core of Deng Xiaoping's reform program was decentralization, which may have been instrumental in generating high economic growth in China over the past two and half decades. The massive fiscal decentralization practiced between 1978 and 1993, however, significantly weakened the government's extractive capacity. In the 18 years between 1978 and 1995, the ratio of total government revenue to GDP fell from 31.2 percent to around 10.7 percent.[10] Moreover, the central government share in overall government revenues declined. Even compared to low-income countries, the extractive capacity of the Chinese government in general and of the central government in particular was rather weak.[11] With so little at its disposal, the central government simply could no longer afford to serve as the payer of last resort in health care.

2. Changing structure of health expenditure since reform

As the government became less willing and able to finance health care, the structure of China's health spending drastically changed. Before the urban economic reform, the government's budgeted health spending normally accounted for around 35 percent of total health expenditure. The mid-1980s began to see a significant decline of the government share. By 2002, it had dropped to 15.21 percent of the total (Figure 2), an extremely low level compared even to most developing countries.

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8 World Bank, *Financing health care: issues and options for China.*

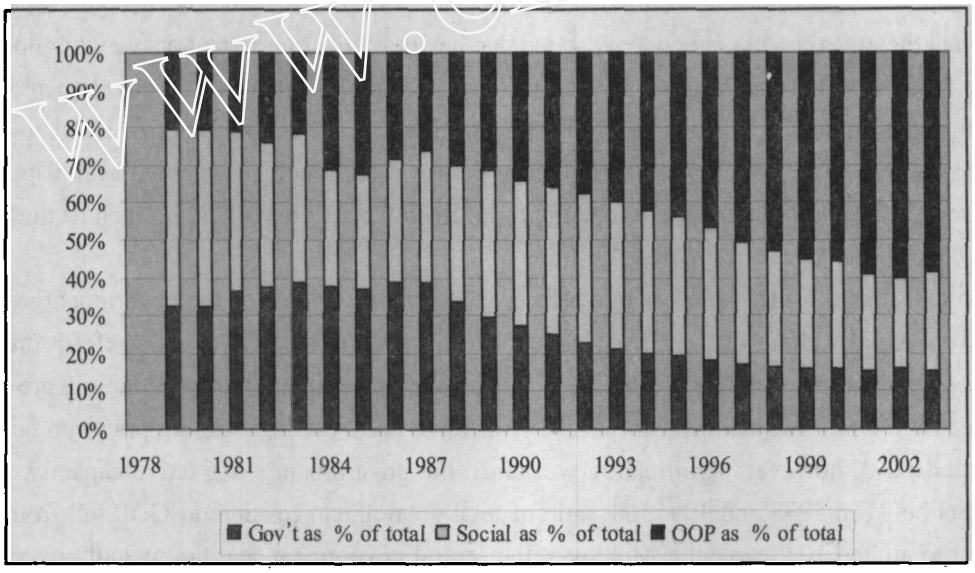
9 Shaoguang Wang, "China's health system: from crisis to opportunity," pp. 5-50.

10 National Bureau of Statistics of China, *China statistical abstract 2005*, p. 71.

11 Shaoguang Wang, & Hu Angang, *The Chinese economy in crisis: state capacity and tax reform.*

Meanwhile, the share paid by social insurance dwindled from 47.41 percent in 1978 to 26.45 percent in 2002. The cause of this adverse financing trend is not difficult to identify: the economic reform ruined the base of the GIS-LIS financing system. As mentioned before, GIS and LIS were locality- and unit-based self-insurance schemes that could only function under the condition of "soft budget constraints." Decentralization and marketization, while giving local governments and state owned enterprises (SOEs) greater operational autonomy, imposed stern fiscal discipline on them. The shift from "soft budget constraints" to "hard budget constraints" effectively dismantled the de facto nationwide risk pool and made it much more difficult for individual SOEs and local governments to finance employees' health care.[12]

Figure 2. Composition of total health expenditure by source



Source: Ministry of Health, *China national health account report.*

Since the GIS-LIS financing system no longer worked properly, the Chinese government in the mid-1980s began to push for health insurance reform, the purpose of which was primarily to reduce the financial burden of health care for government as well as SOEs. The reform was perhaps too successful, effectively turning China's urban health system into a system of private financing with public expenditures left just to fill gaps. This transformation essentially shifts the responsibility of caring for ill people from the government and employers to patients

12 Facing mounting competitive pressure prompted by the economic reform, for instance, nonprofitable SOEs often could not continue paying the fixed percentage of wages needed to preserve sufficient medical insurance funds, thus jeopardizing workers' access to health care. Moreover, due to the downsizing and bankruptcy of SOEs, millions of workers lost their jobs and job-related health insurance. Even profitable firms might favor lower social insurance burdens so as to stay competitive. The problem was compounded by the rapid rise of the non-state sector. Not required to provide their employees with medical benefits, the upsurge of private and foreign invested firms further threatened access to health care coverage for workers and their dependents.

themselves.[13]

Since the share of health spending paid by public sources (including both government budget appropriation and social insurance) has plunged, an ever-increasing burden has fallen directly on consumers as out-of-pocket financing (OOP). Compared to most countries in the world, China's reliance on out-of-pocket payments is extremely high.[14]

Whether health costs are borne by individuals or by public sources is certainly not just a question of whether money comes out of the left pocket or the right. When medical costs are primarily borne by public sources, even poor people may enjoy a minimum level of health care. When health costs are primarily borne by individuals, however, economic inequality will inevitably be converted into health inequity. Health inequity will in turn affect the health status of the entire nation.

II. Inequity in health care financing

Health is essential to human well-being and to overcoming other effects of social disadvantage. A health system is supposed to provide reasonably equal access to care and protect the most vulnerable. Indeed, many countries, including China, declare "equity" as the principal aim of their health care systems. Yet, in the literature, there has been a considerable disagreement over the definitions, measurements, and interpretations of the concept. This study has no intention of engaging in the conceptual and theoretical debate. Instead, it empirically examines the variations between different socioeconomic groups in urban China along two dimensions: the financing and utilization of health care.

On the issue of health care financing, equity means that health care should be financed according to ability to pay rather than to the amount of medical care received. More specifically, equitable health care financing should meet at least two criteria. First, individuals should not become impoverished, or pay an excessive share of their income in obtaining needed health care. In other words, equity in health care financing requires a high degree of financial risk pooling or insurance. Second, poor people should pay less towards the health system than rich people. Not only do the poor have lower incomes but also a larger share of their income goes to basic needs such as food or shelter. Contribution to the health system should reflect this difference in disposable income between the rich and the poor. For those reasons, we use the coverage of health insurance and the share of health care expenditures in total annual income to analyze the issue of equity in health care financing.

As mentioned before, the last two decades have seen a dramatic drop in health care coverage in urban China. At the onset of the economic reforms, the coverage of health insurance was

13 G. Henderson, *et al.*, "Distribution of medical insurance in China"; C. Grogan, "Urban economic reform and access to health care coverage in the People's Republic of China," pp. 1073-1084; W. Yip, & W. Hsiao, "Economic transition and urban health care in China: impacts and prospects"; Y. Liu, "Reforming China's urban health insurance system," pp. 133-150; Project Team of DRC, "An evaluation and recommendations on the reforms of the health system in China," pp. 1-259.

14 Shaoguang Wang, "China's health system: from crisis to opportunity."

nearly universal for the urban population.[15] Since then, the proportion of those with insurance has fallen precipitously (see Table 1). By the end of 2003, only roughly half of urban residents were insured by some schemes, including 30 percent by the newly established Urban Employees' Basic Medical Insurance System.[16] The rest of the population, including dependents of the insured, paid out of pocket for their medical services. Apparently, the new insurance system failed to take over the members who had previously been covered by old insurance schemes such as GIS and LIS, which were phasing out.

Table 1. Changes in insurance coverage

	1993	1998	2003	1993-2003 change
1. New basic insurance			30.4	30.4
2. GIS	18.2	16	4	-14.2
3. LIS	35.3	22.9	4.6	-30.7
4. CMS	1.6	2.7	6.6	5.0
5. Other social insurance	17.4	10.9	4	-13.4
6. Commercial insurance	0.3	3.3	5.6	5.3
7. None	27.3	44.1	44.8	17.5
Insured (1-5)	72.4	52.6	49.6	-22.8
Uninsured (6-7)	27.6	47.4	50.4	22.8

Source: Center for Health Statistics and Information of MOH, *An analysis report on the national health services survey in 2003*, p. 16.

The impact of the shrinking overall coverage differs between social groups. Table 2 clearly suggests that there were large socioeconomic differentials in health insurance coverage in 2003. First, there was a visible gender gap in health insurance coverage. The coverage for males was 5.4 percent higher compared with that for females. Second, the older the age cohort was, the higher degree of coverage it got. Consequently, the insured population was far more elderly and ill, on average, than the general population. The lopsided coverage of the elderly among the insured was perhaps a result of "adverse selection": the firms that participated had heavier burdens of older workers and retirees, whereas the firms that opted out employed disproportionately young and healthy workers.[17] The pervasive adverse selection in turn was

15 World Bank, *Sharing rising incomes: disparities in China.*

16 Under the new system, medical insurance is financed by contributions from both employees and employers. The premiums are split into two accounts: an individual Medical Savings Account (MSA) and a shared Social Pooling Account (SPA). Participants' payments for care come first from their own MSAs, and then from out-of-pocket funds, while the SPA only functions as a kind of catastrophe insurance.

17 K. Eggleston, J. Wang, & K. Rao, "From plan to market in the health sector? China's experience"; K. Eggleston, *et al.*, "Disparities, moral hazard, and adverse selection in health insurance in urban China: microevidence from five cities."

a result of incomplete insurance coverage.[18] Third, the higher the level of education one had

Table 2. Insurance coverage by group, 2003

	Basic Insurance	GIS & LIS	Other Schemes	Commercial	None
Persons surveyed	15023	4247	5300	2723	22120
Coverage %	30.4%	8.6%	10.7%	5.5%	44.8%
Sex					
Male	32.5%	9.4%	10.5%	5.5%	42.0%
Female	28.4%	7.8%	11.0%	5.5%	47.4%
Age					
0—4	4.6%	1.6%	12.6%	12.3%	68.9%
5—14	3.0%	2.3%	18.6%	23.2%	53.0%
15—24	9.0%	3.3%	16.4%	10.0%	61.2%
25—34	32.1%	7.1%	9.4%	3.4%	48.1%
35—44	34.6%	7.6%	9.0%	3.1%	45.7%
45—54	40.1%	10.7%	9.8%	2.3%	37.1%
55—64	46.7%	13.2%	7.3%	0.7%	32.1%
>65	42.5%	15.9%	7.3%	0.4%	33.9%
Education					
Illiterate	16.0%	6.2%	21.1%	1.2%	55.5%
Primary	23.4%	7.5%	17.2%	1.7%	50.2%
Junior high	25.5%	7.6%	9.8%	4.8%	52.2%
Senior high school	30.7%	9.0%	8.0%	8.4%	44.0%
2-year college	51.2%	11.2%	6.7%	6.4%	24.5%
College & above	52.1%	12.0%	6.6%	7.6%	21.7%
Profession					
Manager	68.9%	14.8%	12.1%	0.9%	3.3%
Technician	61.2%	16.1%	12.2%	2.1%	8.5%
Clerk	72.0%	8.0%	10.3%	2.1%	7.7%
Service worker	47.1%	7.8%	21.1%	3.7%	20.3%
Worker	56.7%	25.5%	7.3%	1.6%	9.0%
Farmer	2.5%	0.3%	3.0%	5.2%	89.1%
Student	2.3%	2.5%	35.1%	28.8%	31.3%
Retiree	61.1%	21.3%	11.1%	0.5%	6.0%
Unemployed	20.6%	3.1%	13.7%	4.8%	57.8%
*Others	18.3%	3.2%	19.9%	10.5%	48.1%

Note: "Others" include owners of private firms, the self-employed, and above all, migrant workers.

Source: Recalculated from Center for Health Statistics and Information of MOH, *An analysis report of the national health services survey in 2003*, pp. 93-95.

18 D. M. Cutler, and R. J. Zeckhauser, "The anatomy of health insurance," pp. 563-643.

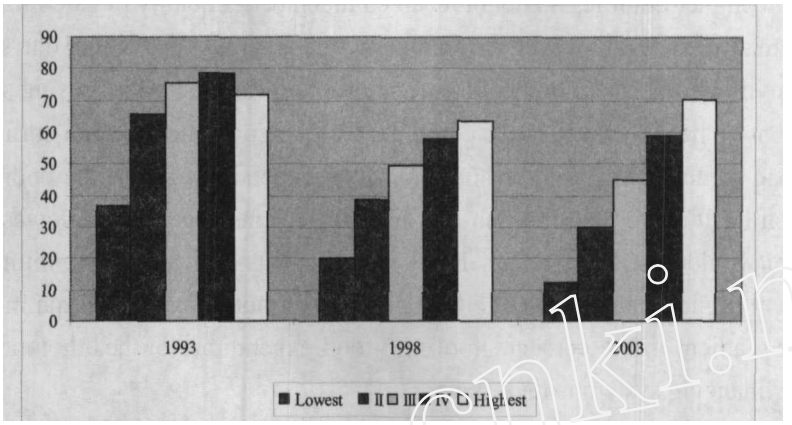
received, the more likely he would be insured. Below two-year college, the gaps between those who had gone through various levels of schooling were discernible but small. Once one obtained a degree from two-year college or above, his chance of being insured increased substantially. Fourth, people in the formal sector fared much better than those in the informal sector. Insurance coverage for managers, technicians, office clerks, blue-collar workers, and retirees from the formal sector was about 90 to 95 percent. The portion of insured service workers was relatively low, largely attributable to the fact that private ownership had a stronger presence in tertiary industry than in manufacturing industry. Several groups were largely left without effective health insurance coverage: (i) the unemployed, (ii) the self-employed, and (iii) migrant workers.

The last group deserves special attention because many of them either are self-employed or have only casual employment. China's National Family Planning Committee estimated that the country's so-called "floating population" stood at 140 million as of the year 2003, and exceeded one-tenth of the national population. Among them, the vast majority were at their most economically active ages, namely, between 15 to 35 years old (http://www.chinanews.cn/news/2004/2005-01-06/772.shtml). Although some cities have attempted to extend the coverage of health insurance to those migrant workers, it has proved hard to put such an idea into practice for a number of reasons. Employers, as expected, are on the whole reluctant to pay their shares of premium for migrant workers who are hired mostly on a temporary and informal basis. Due to their high mobility, migrant workers themselves are also generally unwilling to pay for an insurance scheme in which both individual savings accounts and shared pooling funds are anchored with a specific locality and not transferable. Self-employed migrants, who make up a large proportion of migrants in urban China, have even less incentive to join the program. Besides, the government has not yet figured out a way to transfer individual medical savings accounts, and manage risk pools across cities and provinces.[19] Like other uninsured residents, migrant workers have to pay out of pocket for health services.

Figure 3 compares coverage rates between income quintiles, from poor to rich, regardless of gender, age, education and profession. Income quintiles are groups of equal size, each representing 20 percent of the total population, and ranked by their personal income from poorest to richest. For all income quintiles, coverage decreased between 1993 and 2003. The most dramatic decrease occurred for the second and third income quintiles. The coverage rate for the lowest quintile had already been quite low compared to all of the other quintiles in 1993. It experienced a sizeable further reduction during the period. Only for the highest income quintile were changes negligible. In 1993, one's income and the probability of being insured were correlated, but rather weakly. By 2003, the correlation between the two had become unmistakably strong. In other words, rich people are as well protected by health insurance as ever, whereas poor people increasingly have to pay out of pocket for medical services.

19 Xiang Biao, "Migration and health in China: problems, obstacles and solutions."

Figure 3. Coverage rate of health insurance by income quintile



Source: Center for Health Statistics and Information of MOH, *An analysis report of the national health services survey in 2003*, pp. 83-86.

The concept of vertical equity suggests that the relative weight of the financing burden borne by the lower income groups should be less than that borne by the top income groups. More specifically, the richer a person is, the greater share of his non-food expenditure should go to pay for health care. This is an alternative way of assessing the progressivity of health care financing.

Table 3. Health care spending by income group (1993 constant prices)

	Lowest	II	III	IV	Highest
Health spending: 1993	104	102	115	113	152
1998	72	98	121	155	216
2003	102	151	227	300	459
Annual growth:1993-98	-7.16	-0.87	0.98	6.6	7.31
Annual growth:1998-03	7.4	9.16	13.52	14.06	16.24
% of income in 1993	14.07	8.13	6.86	5.15	3.95
% of income in 1998	9.51	7.2	6.34	6.08	4.7
% of income in 2003	10.78	8.27	8.08	7.25	5.64
% of non-food spending in 1998	20.55	19.52	18.46	16.88	16.01
% of non-food spending in 2003	19.61	17.08	18.42	17.67	14.87

Source: Center for Health Statistics and Information of MOH. *An analysis report of the national health services survey in 2003*, pp. 83-85.

Table 3 presents data on average spending on health care by income group in urban China. During the period of 1993-2003, spending on medical items in absolute amounts increased

considerably for the second through the highest quintiles, but decreased for the lowest quintile. In absolute terms, the higher quintiles no doubt received much better quality of care in 2003 than 10 years before. In relative terms, however, a different picture emerges. The higher one's income, the smaller the share of income spent on health care in all three survey-years. If using solely the share of income spent on health care to judge equity in health care financing is not sufficient, we may look at the ratio of health spending to total non-food expenditure. Here the poor actually spent much more on health care than the rich did. In 2003, for instance, for the lowest income quintile, health care would cost, on average, 19.61 percent of its non-food expenditure, which was about 32 percent higher than the relative financial burden borne by the top quintile (14.87 percent). The clear gradient in the percentage of non-food expenditure on health confirms that China's health care financing system is regressive.

III. Inequity in health care utilization

As health care financing becomes more regressive, there is a danger that health care would be delivered more to social groups that are better insured and/or that have greater ability to pay than to those who actually need medical services. This subsection examines the degree of inequity in health care utilization.

Here "need" is a crucial concept. Ideally, an assessment of the distribution of need in a population would require objective clinical information. This type of data, however, is not available. An alternative is to use measures of self-reported sickness of individuals.[20] From China's National Health Services Surveys, we can derive three self-reported health variables: (1) the morbidity rate in the previous two weeks, (2) the incidence of chronic diseases in the last year, and (3) the bed-days due to illness in the last year.[21] It should be emphasized that the first two indicators are really perceptions of illness. They are related to actual clinically recognized illness only through the medium of the individuals' subjective perceptions. The last indicator is different. As a quantitative measure of the chronic or temporary disability in a population, the bed-day rate goes beyond a mere perception of discomfort. It has to be the time for which the interviewee abstains from other activities due to illness. For this reason, the bed-day rate may be the best proxy for health care need (and health status).

Studies of other countries have found that medical insurance is one of the key factors that enable individuals to secure health care.[22] How does insurance coverage affect the use of health care services in urban China? Table 4 presents the distribution

20 H. Gravelle, & M. Sutton, "Income-related inequalities in self-assessed health in Britain: 1979-1995"; E. van Doorslaer, & A. M. Jones, "Inequalities in self-reported health: validation of a new approach to measurement."

21 The three indicators can also be used to describe the health status.

22 R. Anderson, & J. F. Newman, "Societal and individual determinants of medical care utilization in the United States"; R. N. Rosett, & L. F. Huang, "The effect of health insurance on the demand for medical care," pp. 281-305; D. de Meza, "Health insurance and the demand for medical care," pp. 47-54; W. G. Manning, *et al.*, "Health insurance and the demand for medical care: evidence from a randomized experiment," pp. 251-77; J. Warner, & T. Hu, "Hospitalization insurance and the demand for inpatient care."

of two measures of need (the morbidity rate and the incidence of chronic diseases) and two measures of health care utilization (the average number of inpatient and outpatient visits)[23] by type of insurance coverage. The data on the bed-day rates across insurance types are unfortunately not obtainable. Between 1993 and 2003, the self-reported 2-week morbidity rates went up slightly for people under the coverage of standard social insurance schemes (such as the new basic insurance, GIS and LIS), but fell for people who were either insured by other public schemes or not insured by any public scheme at all. In the same period, however, chronic disease prevalence increased for all the population except those who relied upon commercial insurance. No matter which of the two indicators we choose to measure need, one thing seems to be clear in all the three years: The better insured one is, the greater need for medical services he has. In 2003, for instance, the self-reported 2-week morbidity rate and the incidence of chronic diseases were 199.3 and 403.4 per 1000, respectively, for those who were insured by the standard schemes, compared to 124.7 and 172.5 per 1000 for those who had to pay their health care entirely out of pocket.

Table 4. Distribution of need and utilization by insurance type

	Standard insurance schemes	Otherinsurance schemes	Commercial insurance	No insurance
Year	Two week illness episodes %			
1993	193.0	179.4	125.9	138.4
1998	235.0	157.9	122.1	159.5
2003	199.3	138.1	93.6	124.7
Year	Chronic disease prevalence %			
1993	356.6	170.3	155.6	137.6
1998	440.9	199.2	253.8	182.3
2003	403.4	175.3	57.3	172.5
Year	Two week outpatient visit %			
1993	200.8	239.7	125.9	173.8
1998	217.0	190.5	111.5	136.7
2003	148.2	164.2	83.4	85.8
Year	Inpatient care last year %			
1993	6.2	4.2	3.7	3.3
1998	8.3	4.0	4.8	3.4
2003	6.3	9.5	2.0	3.0

23 The outpatient utilization rate was calculated as the number of outpatient consultations within the last 2 weeks divided by the total number of interviewed persons. The inpatient utilization rate was calculated as the number of hospital admissions during the previous 12 months divided by the total number of interviewed persons.

Correspondingly, the usage figures of outpatient visits and inpatient care showed that utilization usually varied positively with the degree of protection offered by insurance. As the health reform deepened, however, inequity in utilization increased. In 1993, the average number of outpatient visits for those insured by the standard public schemes was 15.5 percent (200.8/173.8) higher than that for those without any insurance. By 2003, the difference rose to 72.7 percent (148.2/85.8). In the area of inpatient service utilization, the gaps between the two above-mentioned groups were even larger, ranging from 0.88 times in 1993 to 1.44 times in 2003, although changes within each group were marginal during the 10 years.

When we compare trends in need and trends in utilization, the impact of the urban health insurance reform on health care delivery becomes evident. For instance, the morbidity rates did not decline dramatically to warrant a marked reduction in the outpatient service utilization. Similarly, the rising incidence of chronic disease was not matched by a comparable increase in inpatient service utilization. Apparently, the reform has suppressed utilization across the board and hit hardest at the uninsured.

Table 5. Distribution of need and utilization by income quintiles

Income quintile	Lowest	II	III	IV	Highest
Year	Two week illness episodes %				
1993	14.39	15.55	17.43	17.58	18.98
1998	15.66	16.93	15.93	17.85	18.59
2003	13.38	13.56	14.29	14.31	15.48
Year	Chronic disease prevalence %				
1993	15.74	17.14	19.75	20.51	22.26
1998	15.90	18.70	18.20	22.50	24.80
2003	14.24	14.62	18.40	19.48	22.21
Year	Bed-day due to illness %				
1993	2.22	2.04	2.15	2.04	2.09
1998	1.94	1.75	1.59	1.74	1.73
2003	3.69	3.32	3.12	3.39	3.33
Year	Two week outpatient visit %				
1993	21.80	19.60	22.80	22.30	26.90
1998	16.50	16.60	15.50	18.50	20.30
2003	10.10	10.20	12.00	11.80	15.00
Year	Hospitalization %				
1993	4.53	5.13	5.26	4.86	5.32
1998	3.07	3.07	3.67	4.26	4.20
2003	3.36	3.03	4.55	4.66	5.56

It is perhaps puzzling why self-reported rates of illness and chronic disease were much higher for the insured than the uninsured. No doubt, the problem of adverse selection played a part here, for the insured population was far more elderly and feeble, on average, than the general population. This factor alone, however, could not adequately account for the magnitude of the differences. In fact, the distribution of need by income quintile exhibited an equally bizarre pattern (see Table 5). Since poorer people were presumably sicker than richer people, the former were expected to report higher rates of morbidity and chronic disease compared to the latter. What actually happened, however, was exactly the opposite: in the whole period of 1993-2003, richer individuals always reported higher levels of need for medical services whether the need was measured by the rate of morbidity or the incidence of chronic disease. This seeming paradox parallels trends observed in many developing countries. The explanation probably lies in a lower level of sensitivity to illness among those who are less capable of paying for the access costs of medical services.[24] The clear gradient in sensitivity to illness in urban China, with poorer people being less likely to recognize illness or report being ill, suggests that the two indicators based on self-reported sickness might have only limited value as measures of need/health status.[25]

When the number of annual bed-days per 100 persons was used as a proxy-indicator for health care need, then a reversed and expected pattern of distribution surfaced. First, health care need was generally greater for lower income quintiles than for higher income quintiles, with the lowest quintile having the greatest need. Second, the overall time trend of need also reversed its direction when need was measured by the bed-day rate. While need appeared to be declining when it was measured by the other two indicators, it now displayed an upward movement in the period 1993-2003. Third, the gap in bed-day rates between the lowest and highest income quintiles widened from 6.2 percent (2.22/2.09) in 1993 to 10.8 percent (3.69/3.33) in 2003. If self-reports of illness days and incidence of chronic diseases are susceptible to bias and the indicator of disability days is more objective, then perhaps we should use the latter as our basis to study inequity in health care utilization.

Table 5 also gives the distribution of utilization of health care services by income level, separately for outpatient and inpatient services. While the health care needs, as expressed by the bed-day indicator, increased for all income-quintiles, the outpatient service utilization declined drastically for the whole population. However, this overall reduction in the utilization of outpatient services should not lead us to overlook different trends between the population groups. A close examination of Table 5 reveals a positive correlation between the degree of decline and income level. Each of the five income quintiles, ranging from the lowest to the highest, reduced its utilization by 53.7 percent, 48.0 percent, 47.4 percent, 47.1 percent, and 44.2 percent, respectively, in the period of 1993-2003. In 1993, the gap in the utilization of outpatient services between the highest and lowest income quintiles was 23.4 percent (26.9/21.8). By 2003, the gap

24 J. Caldwell, *et al.*, "Sensitization to illness and the risk of death: an explanation for Sri Lanka's approach to good health for all," pp. 365-79.

25 T. Evans, *et al.*, *Challenging inequity in health: from ethics to action*.

widened to 48.5 percent (15/10.1).

With regard to inpatient service, the utilization level suffered a sizeable reduction for the lowest through third income quintiles, remained more or less the same for the fourth quintile, and increased somewhat for the highest quintile during the same period. Consequently, the relative differences in inpatient utilization rates between the lowest and highest quintiles grew from 17.4 percent (5.32/4.53) in 1993 to 65.5 percent (5.56/3.36) in 2003, which implied that even with serious health conditions, many poor people were not receiving the care needed.

In brief, urban China has witnessed rising disparities in health care utilization between the insured and uninsured and across the wealthy and poor. Clearly, after a series of reforms in health care financing, health insurance coverage and income have become more important than ever in determining who receives medical services and who does not. When utilization is determined increasingly by ability to pay rather than by need, many Chinese, especially those with low incomes, are exposed to the risk of huge financial hardship from catastrophic illness expenses and even the risk of illness-induced poverty.

IV. Health care and poverty

Under the current system of urban health care, the rich now can enjoy international level first-class medical care, while the poor are often forced to endure minor health problems and put off dealing with major health conditions. As three recent national health services surveys document, the marketization of health care has been particularly detrimental to the wellbeing of the poor.

First, there was a marked rise in the percentage of people not seeking care for economic reasons (Table 6). The proportion of people who were sick but did not seek outpatient care increased continuously from 42.4 percent in 1993 to 57 percent in 2003. During the same period, the proportion of patients who should have been hospitalized but chose to ignore the professional's hospitalization recommendations also rose, albeit only marginally. In 1993, only a tiny fraction of sick people (4.31 percent) was unable to seek outpatient treatment because of economic difficulties. The ratio quickly climbed to 32.28 percent in 1998 and 36.4 percent in 2003. The most important reason for not seeking inpatient care was also fear of being unable to pay the hospitalization fee. Inability to pay was the reason given by 40.96 percent of those who refused to be hospitalized when they should have in 1993; the ratio soared to 60.09 percent in 1998 before falling to 56.1 percent in 2003. There was yet another category of patients who had been hospitalized but asked to be discharged before treatment was finished. In 1998, 36.47 percent of all discharged patients fit this category; the ratio dropped slightly to 34.5 percent in 2003. Why did they rush to be discharged when they were not yet well? Financial difficulty was the main reason: 45.72 percent of the prematurely discharged patients did so for this reason in 1998 and the proportion reached 53 percent by 2003.

Table 6 shows us that the growing financial burden engendered by health care financing reform has prevented a large segment of the population from accessing the existing health care system. When they are sick, they dare not see a doctor; when they are seriously ill, they dare not

enter hospital; and when they are in hospital, they rush out before they are well, afraid of being crushed by the heavy medical costs.

Table 6. Proportion of urban residents "not seeking care" (%)

Year	Not seeking outpatient care in the last 2 weeks	*Among those due to financial difficulty*	Not seeking inpatient care last year	*Among those due to financial difficulty*	Patients who ask for early discharge	*Among those due to financial difficulty*
1993	42.40	*4.31*	26.20	*40.96*		
1998	49.90	*32.28*	27.50	*60.09*	36.47	*45.72*
2003	57.00	*36.40*	27.80	*56.10*	34.50	*53.00*

Source: Ministry of Health, The first, second and third National Health Services Surveys, http://www.moh.gov.cn/tjxxzx/index.htm.

Second, recent years saw an emerging pattern of health care utilization in which the lower the income quintile was, the higher the percentage of people in the quintile who did not seek care. As late as in 1993, income level did not seem to play a decisive role in determining whether or not one sought outpatient care. In fact, the proportion of people not seeking care was higher in the middle three income quintiles than in the lowest quintile, and the difference between the lowest and highest quintile was almost negligible (Table 7). After 1998, however, low income became a factor that severely limited people's health care seeking behavior. By 2003, nearly two-thirds of the lowest quintile did not seek outpatient care while only 45.2 percent of the highest quintile did the same. With regard to inpatient care, a gradient by income quintile was already visible in 1993. By 2003, the gradient had become much steeper. Obviously, greater under-use of service by the poor was associated with their economic difficulties. When poor people experienced minor illness, they either tried to put up with it or resorted to self-treatment. Unless it was absolutely necessary, they would avoid medical services.

Table 7. Proportion of urban residents "not seeking care" by income quintile

Income quintile	Lowest	II	III	IV	Highest
Year	Not seeking outpatient care in the last two weeks %				
1993	3750	4270	4020	3940	3590
1998	4910	4610	4410	4550	3990
2003	6020	5770	5420	5120	4520
Year	Not seeking inpatient care in last years %				
1993	3167	2384	2242	2104	1687
1998	4680	4260	3300	2900	2740
2003	4158	3330	2273	2823	1718

Source: Ministry of Health, The first, second and third National Health Services Surveys, http://www.moh.gov.cn/tjxxzx/index.htm.

Third, when the poor were forced to endure minor diseases and delay treatment of major ones, minor health problems might become major ones, and major health problems might lead to the loss of the ability to work. The vicious cycle of "illness due to poverty" and "poverty due to illness" was becoming a prominent social problem in urban China. Massive medical bills or the loss of the ability to work brought many people's standard of living below the poverty line. When the Ministry of Health conducted its "Second National Health Services Survey" in 1998, disease and injury were not a major cause of urban poverty. Less than 4.5 percent of the people living below the poverty line attributed their misfortune to "illness or disability." At that time, unemployment (covered under "others" in Table 8) was the principal cause.[26] By 2003, however, the percentage of illness-caused poverty reached a quarter of the total urban poor. Apparently, one case of major illness can now plunge a once well-off family into dire straits and make a once poor family absolutely impoverished.

Other surveys found that the role of illness in aggravating poverty was more pronounced. For instance, a nation-wide survey of urban households living under the poverty line conducted by the Ministry of Civil Affairs in late 2002 showed that up to two-thirds (66.2 percent) of poor families had at least one member with chronic diseases and more than one-third (33.7 percent) of poor families had at least one disabled member. After analyzing various factors contributing to impoverishment, the ministry concluded that illness had become the single most important cause of urban poverty.[27] Illness now poses a threat not just to poor people's health but also to their very livelihoods.

Table 8. Illness and poverty

	1998	2003	Change
Poverty incidence %	7.24	6.10	-1.14
Causes of poverty %			
Illness or disability	4.44	25.00	20.56
Lack of able-bodied person	7.07	26.90	19.83
Inhospitable natural conditions	0.60	3.50	2.90
Man-made obstacles	2.88	8.10	5.22
Others	85.00	36.50	-48.50

Source: Ministry of Health, The first, second and third National Health Services Surveys, http://www.moh.gov.cn/tjxxzx/index.htm.

Conclusions

26 Ministry of Health, "The second national health services survey."

27 Li Weiwei, "Ministry of Civil Affairs issuing survey results on 10,000 households enjoying subsistence allowances in 100 cities in China."

In the year 2000, the World Health Organization (WHO) assessed the health system performance of its 191 member nations. In terms of overall health system performance, China was ranked 144, worse than Egypt (63), Indonesia (92), Iraq (103), India (112), Pakistan (122), Sudan (134), and Haiti (138). With respect to the fairness in financial contribution, China was placed even lower at 188, the fourth country from the bottom, only slightly better than Brazil, Burma, and Sierra Leone. India, which China has long regarded as a country with extremely large gaps between rich and poor, was ranked 43, and Iraq, which had been subjected to almost ten years of economic sanctions, stood at 56. All other countries with large populations, such as Pakistan, Indonesia, Egypt, and Mexico, performed better than China.[28] This was in striking contrast with the praise China had received for its health system two decades before.[29] For a self-styled "socialist" country, this was truly a great humiliation. As demonstrated in this paper, China's own statistics to a large extent confirm the WHO's assessment.[30]

How could China build up one of the most affordable and equitable health care systems in the world and make remarkable strides in improving the health status of its population during the era of Mao Zedong when the country was dirt-poor? Why is it that despite a stronger economic base, higher scientific and technical level, and greater expenditures, the performance of the nation's health care system has been so disappointing under the market-oriented economic reform? To answer these questions, no doubt, we need to look into a myriad of factors. This paper focuses on two, which we believe underlie all others: the government's willingness and ability to provide primary health care for all. It was due to the lack of both willingness and capacity to tackle the issue of health care inequity on the part of the government that China's health care system decayed from a model for the developing world to an embarrassment for herself.

The pre-reform health care system was affordable and equitable primarily because it was based upon social norms that favored equity. Since China embarked on market-oriented reform in the 1980s, with efficiency preceding equity, this sustaining force gradually lost its power. Behind all the measures of recent health care reform lay an unstated premise: the market was more efficient in allocating health care resources than the state. The faith in market forces gave the state an excuse to retreat from its roles as the funder and provider of health care. It was against this background of ideological swing that the health sector underwent a paradigm shift from a universal and state welfare model to a "societalized" model, where the state sought to forsake its responsibility in health care financing and provision and expected societal actors to pick it up.[31] The Chinese leaders seemed to believe that as long as the economic boom continued, all citizens, rich or poor, would eventually be able to afford their health care out of pocket.

Precisely when the government's commitment to equity in health care was fading, the

28 WHO, *The world health report 2000 – Health system: improving performance.*

29 In WHO's 1978 Alma Ata Conference "Health for all by the Year 2000," China's primary health care system was featured as model for the world.

30 It must be noted that, despite all the problems discussed in this paper, so far China has not witnessed a measurable decline in its overall health status.

31 Guan Xinping, "China's social policy in the context of globalization"; Wong, Linda, "Individualization of social rights in China."

massive fiscal decentralization introduced in the 1980s and early 1990s significantly impaired its extractive capacity. As the ratio of its revenue to GDP quickly shrank to a level far lower than that in most countries, the government found that there was not much at its disposal. Under such circumstances, even if the government had maintained its commitment to distributive justice, it would not have been able to allocate sufficient resources to health care anyway.

The government's unwillingness and inability to shoulder the responsibility of primary health care for all explains why China reduced its budgeted appropriations for health care and embraced the Singaporean model of health insurance. Those changes in turn explain why inequity in health care financing and utilization worsened.

From the contrast between the pre-reform and post-reform periods, perhaps we can draw two lessons. First, economic growth as such cannot bring about health care for all. How the fruits of economic growth are distributed is equally important. Second, whatever gains market forces may engender, they are capable of resolving neither the problem of fairly allocating health resources nor the problem of asymmetrical distribution of information between patients, insurers, and providers. Relying on the free market to finance and provide health care would inevitably lead to reduced access to health services for the poor and the vulnerable.

Good health is both intrinsic to human wellbeing and instrumental to a whole range of human functioning.[32] The absence of good health could deprive people of their rights to exercise choices, pursue social opportunities and plan for their future. Moreover, cross-national comparisons have established that a healthy population can help alleviate poverty, reduce wider social inequality, and enhance economic growth.[33] Since health is so important, it should not be allowed to flounder at the mercies of the market.[34] For both ethical and practical reasons, ensuring the health of every citizen must be an important goal for policymakers of any country, particularly in China, a country that still professes to uphold the socialist principle of equity.

The contrast between the pre-reform and post-reform periods ironically also makes us optimistic about the prospects for restoring an affordable and equitable health care system in China. If identifiable policy options are responsible for much of expanding health inequity in the country, it follows that disparities in health care are amenable to policy interventions and hence avoidable, at least partially. In other words, more enlightened public policies should be able to arrest the polarizing tendencies.

Encouragingly, there are signs of positive changes being under way. In recent years, the Chinese government has been moving away from the reform strategy that is based on "the Washington Consensus" and begun to launch what Stiglitz[35] calls "the second generation reform" that is concerned as much with distributive justice as with economic growth.[36] Accordingly,

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32 A. Sen, *Development as freedom*.

33 R. J. Barro, & X. Sala-i-Martin, *Economic growth*; J. Drèze, & A. Sen, *India, development and participation*; A. Deaton, "Health, inequality and economic development"; A. Deaton, "Health in an age of globalization."

34 H. Bekedam, "Macroeconomics and hospital reform."

35 J. E. Stiglitz, "Second-generation strategies for reform for China."

36 Shaoguang Wang, Hu Angang & Zhou Jianming, "The second generation reform strategy: vigorously promote state building."

the government has set out to redefine the appropriate scope and nature for its involvement in economic and social affairs. The policy re-orientation manifests itself in the fact that the government has since the late 1990s plunged more and more money into safety net building in general and health care in particular.[37]

Meanwhile, the Chinese government has also begun to re-engineer its institutions of resource extraction. Consequently, after an incessant fall for many years, government revenue as a percentage of GDP is finally on the rise, growing from 10.7 percent in 1995 to 19.3 percent in 2004,[38] largely recovering lost ground since the mid-1980s.

Admittedly, the Chinese government's commitment to distributive justice has yet to be fully restored, and its extractive capacity has yet to be fully rebuilt. Nevertheless, we have reason to believe that, when both willingness and capacity on the part of the government are in place, China should be able to universalize access to basic health care again, as it did a quarter of century ago.

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