

# Access to Care in Rural China: A Policy Discussion

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## Executive Summary

Providing healthcare in poor, rural regions is a notoriously difficult task and enormous obstacles exist in trying to provide quality care in areas that are impoverished and remote. Although China's economy has rapidly expanded in recent years, many of the benefits have been concentrated in urban areas. Of the many rural health care challenges, the one that particularly afflicts China's contemporary rural society is access to health services. Presently more than 90% of China's rural residents are uncovered by any health insurance system. High medical costs and the inaccessibility of medical services have broad implications for China's future. One indicator of the current state of the health care system in rural China has been declining health indicators and poorer health outcomes. A new Cooperative Medical Scheme has been introduced, but in order for it to be successful, the Chinese government must take a number of measures. This paper presents a few recommendations.

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## **Introduction**

Providing healthcare in poor, rural regions is a notoriously difficult task. Enormous obstacles exist in trying to provide quality care in areas that are impoverished and remote. There are education challenges in informing the public about health prevention and techniques as well as difficulties in constructing a health infrastructure with limited resources. China's rural areas are no exception. Although China's economy has rapidly expanded in recent years, many of the benefits have been concentrated in urban areas. The rural areas are still extremely poor. In fact, rural areas were arguably better off, in terms of health care, before the Chinese government implemented the reforms that catalyzed China's recent economic growth. Of the many rural health care challenges, the one that particularly afflicts China's contemporary rural society is *access*.

Access to appropriate and needed medical treatment in health care systems is based on five principles: availability, accommodation, accessibility, acceptability, and affordability (Penchansky et al. 1981).<sup>1</sup> Problems with any of these by definition compromises access to care. For instance mistrust of health care providers in rural China (acceptability) (Liu et al. 2003); or long travel times and cost of transportation (accessibility) are factors affecting access to care in rural China today (Liu et al. 2003). Although each of these factors is intimately related to access to care, the primary problem limiting access to care in rural China is affordability. Affordability refers to the ability and methods that people in rural China use to pay for needed health care services.

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<sup>1</sup>Lecture by Professor Richard Lichtenstein, University of Michigan School of Public Health on "The 5 A's of Health Care Access." On September 29, 2005.

## Historical Background

Access has become an important issue in modern China because recent reforms have undermined a once successful rural health care strategy. In June 1965, at the beginning of China's Cultural Revolution, Mao Zedong criticized the Ministry of Public Health when he said, "In medical and health work put the emphasis on the rural areas!" (Sidel et al. 1982). China's population was notoriously unhealthy at this time, with an average life expectancy of approximately 40 years (World Bank. 1997). China's health care system was one of the first institutions to undergo major reforms during the Cultural Revolution. The new emphasis was on prevention, sanitation, and financial "self-reliance" (*zili gengsheng*) (Sidel et al. 1982.).

Prevention was a successful, cost-effective public health strategy. Rather than using expensive medicines to treat illnesses, emphasis was placed on immunizations, prenatal care, family planning and sanitation. These preventive strategies could be implemented without medical experts and so the Chinese government trained individuals selected by their peers (Sidel et al. 1982), who lived and worked within their local communities to implement national health campaigns. These paraprofessionals were known as the "barefoot doctors". The barefoot doctors focused on grassroots public health interventions that prevented common infectious diseases such as schistosomiasis and malaria. These simple interventions had a substantial impact on rural health.

Because of their common backgrounds and minimal required training, the government was able to provide widespread access to the barefoot doctors. In regards to issues of acceptability, rural Chinese citizens trusted the barefoot doctors because they were more interested in positive health outcomes than power and prestige, and they were members of the community. Barefoot doctors provided affordable care to all villagers. They provided free

preventive and primary care, while patients paid a coinsurance fee for medicines, and secondary care. A higher fee was charged for inpatient care.

Throughout the Cultural Revolution, it was emphasized that a physician's reward should be measured in spiritual rather than material terms. Thus, focusing on the common good eased the challenge of financing a health care system as exemplified by the barefoot doctors who were content with treating their less educated neighbors for the same pay as a farmer. This program was a clear success. By 1982, life expectancy had increased to 69 years (World Bank, 1997).

During the late 1970's, China's health care system underwent significant changes. Economic reforms toward privatization and a free market philosophy had taken hold in Chinese society. The gradual shift away from patriotism as a basis for work-motivation shattered the ideological base of the barefoot doctor movement. China's movement towards a market economy caused the central government to reduce investment in health services (Blumenthal et al. 2005). Thus, health care was no longer covered comprehensively for rural Chinese citizens. Without government funding, the barefoot doctors program collapsed. Former barefoot doctors were now forced to be profit driven.

Since 1985, institutional health providers such as hospitals have been required to be financially self-sufficient, since government funds generally cover no more than 15% of operating costs (World Bank, 1997), hospitals have been forced to focus on selling profitable procedures such as x-rays, injections, drugs and lab tests. This profit-making focus often results in patients receiving unnecessary procedures and having to pay higher medical costs than necessary. Over-treatment is estimated to be 60.5% of the total cost for treatments in rural health care clinics and 75% of drug prescriptions in rural health care facilities are thought to be unnecessary (Meng et al. 2000). Yet, the overall effect of the rural health care system becoming

profit driven is severe increases in prices, which cause severe constraints on the affordability of access to care in rural China (Y Liu et al. 2003). These major price increases have coincided with a decline in medical insurance coverage in rural China making health care inaccessible to most of China's rural residents.

Table 1: Rise in Medical Costs and Decrease in Insurance coverage in China

**Table 1.** Medical costs and insurance coverage in China

	1990	1993	1998	% change (1990-98)
Medical costs <sup>a</sup> (yuan)				
Per visit	11	40	79	625%
Per admission	473	1668	2891	511%
Insurance coverage <sup>b</sup>				
Urban		53.7%	42.1%	-22%
Rural		12.8%	9.5%	-25%

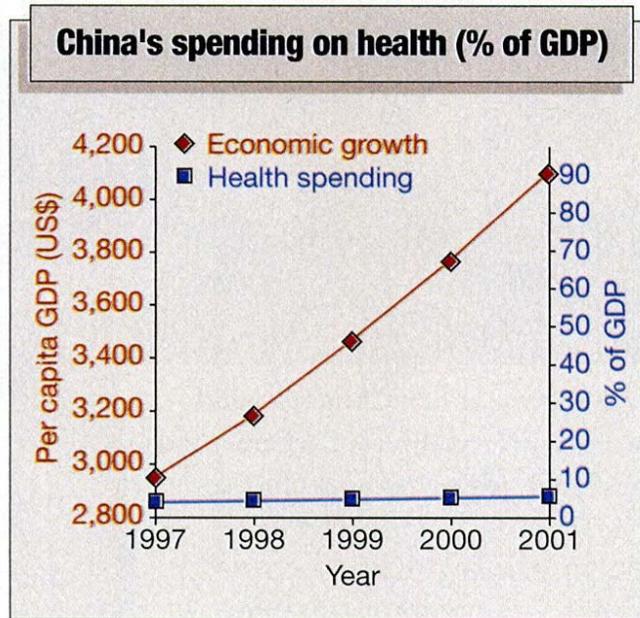
Sources: <sup>a</sup> Ministry of Health, 2000 National Health Statistics. <sup>b</sup> Ministry of Health, 1993 & 1998 National Health Services Survey.

Source: Y Liu et al. 2003

## Current Situation

Although China is experiencing one of the greatest periods of economic growth in history, the percent of GDP being spent on health care has failed to increase. The rural Cooperative Medical System is practically non-existent in 90% of China's villages. Where the CMS system still exists it is mostly voluntary, causing many villagers to not participate. And corruption among local officials has further hurt the chances of reviving a cooperative medical system (Meng et al. 2000). Table 2, below, displays the stagnant level of GDP spent on health care in China.

Table 2: Percent of GDP spent on health care in China.



Source: Dong et al. 2005

Overall, the current situation leaves over 90% of China's rural residents uncovered by any health insurance system. Thus, most rural residents must pay up front for any medical services. These high costs are compounded by poor physician training and poorly funded hospitals in rural areas resulting in patients failing to receive quality care even after paying high fees. These factors contribute to a situation where people avoid medical treatment as much as possible, and save as much of their earnings as possible in case of a medical emergency. For many, however, obtaining medical treatment is simply not an option. Approximately 41% of individuals who are referred to hospitals for treatment do not go due to their inability to pay (World Bank. 1997). Meanwhile, according to a 2002 Ministry of Health survey, one third of farmers in China receive no medical treatment whatsoever (Jackson et. al. 2005).

The major reason for this is that the unofficial government policy at the time assumed that the market would inspire new mechanisms for health care service (The Economist. 2003). In some cases this did happen, with new schemes for financing health care in a few villages, but in most places, health care became a fee for services arrangement, where individuals had to pay all medical costs up front. Because of the poverty in many regions of rural China, this greatly compromised access and health indicators started to decline.

In 2003, the Chinese government established a new voluntary communal insurance system, essentially an updated version of the old Cooperative Medical Scheme (Wang et al. 2005). Under this system, the government and rural residents both contribute to a collective insurance pool, which is accessible to cover health care services. The plan requires a 10 Yuan (\$1.25) annual contribution from rural residents, which is matched by a 20 Yuan (\$2.50) contribution from the government (10 Yuan each from the central and local governments), and deposited in a special, county-level account (Dong et al. 2005).

For a variety of reasons, this new system is not providing adequate access to health care as will be seen from the discussion to follow.

## Limitations of the Current System

The Chinese health care system varies significantly between the rural and urban sectors. While there is a mandatory insurance scheme with major government financial backing available to urban residents, in rural areas schemes are voluntary and largely financed by rural communities (Table 3).

Table 3: Characteristics of Health Care in China

**Table 2.** Government policies on health insurance systems in China

Dimension	Urban sector	Rural sector
System nature	Social insurance	Community financing
Enrollment requirement	Mandatory	Voluntary
Premium contribution	25% by members	80% by members
Risk pool requirement	City wide	No specification
Organizational guidelines	Comprehensive, based on organized pilots	No specification
Central administration	Ministry of Labour and Social Security	Undefined

Source: Y Liu. 2003

While collective financing on a voluntary basis has had some success in countries such as the United States and Switzerland, rural China's program community financing schemes suffer from several major limitations. They primarily revolve around the following: a small health insurance risk pool, lack of administrative expertise in managing the insurance pool, and issues of adverse selection. These topics are further discussed in the subsequent sections.

### *Small Risk Pool*

Health insurance is about spreading risk. Therefore, a larger risk pool is preferable to a smaller one. This is primarily because the larger the risk pool, the more likely it is that there will be a favorable mix of good and bad risks. The bad risks are mostly those who are chronically or

terminally ill, who therefore need constant medical care. In rural China, many of the bad risks are older individuals with expensive chronic illnesses. An insurance scheme needs to have enough of the latter to subsidize the former. A large subscriber base also means that fixed costs (capital and administrative costs) can be spread over more people which decrease per capita costs.

The small-scale of community financing schemes in China and the fact that risks are pooled only at the township level, while making it easier to maintain the trust that is crucial to keeping members, allows for only very limited pooling of risks and fails to take advantage of economies of scale in administration. The long-term consequence of a small risk pool is insolvency as has been demonstrated by the collapse of the majority of rural Chinese financing schemes.

### *Adverse Selection*

Adverse selection is a challenge for any voluntary health insurance scheme. When a health insurance scheme is voluntary, studies have shown that those with poorer health and a higher likelihood of needing medical care are more likely to opt to get coverage, while generally healthy individuals will often opt out. The good risks are the young, active individuals who only need medical care on occasion. Unfortunately many of the good risks in China fail to see the net-benefits of their health insurance investments opting out of coverage because it is voluntary. This adverse selection has major implications for the success or failure of any health insurance scheme. A risk pool containing mostly bad risks is likely to spend more than it collects and this, when taken to the extreme, results in what is known in insurance circles as a “death spiral.” As costs rise, the health scheme is forced to increase contributions in order to stay solvent. As

monthly contributions (premiums) go up, more of the good risks drop out of the scheme because the value of having coverage is inversely proportional to their monthly contribution (since they are infrequent users of health care services). As the good risks drop out, there are fewer people to subsidize the heavy users of medical care and so costs increase relative to contributions forcing the health plan to raise prices and more of the remaining good risks drop out and the cycle perpetuates itself until the scheme goes bankrupt.

It is clear that adverse selection is a major challenge for success of any rural health insurance scheme. As young rural Chinese recognize that they have little to gain from the CMS and choose to opt out of the scheme or migrate to cities, the pool of good risks continues to shrink. While the take-up of the new CMS scheme is encouraging (so far 65 million people have enrolled and the enrollment rate is up around 70%) (Meng et al. 2000), only time will tell whether those who have opted for coverage are those who know they have a higher probability of needing care.

### *Lack of expertise*

One of the most critical constraints for carrying out the rural health financing and insurance reforms in China is lack of administrative and managerial capacity (Wang et al. 2005). This is not unique to China. Community financing schemes often founder due to lack of organizational and financial management skills. The new CMS is expected to cover an average of 250,000 members per county. These members are much more heterogeneous in terms of their health conditions and geographical locations. Currently, the management office for CMS is understaffed and under-equipped to handle these difficult issues. It is also unclear whether officials at the local level possess the requisite financial know-how to properly manage these

funds when collected. A less obvious issue is that of accountability and transparent handling of CMS funds. The voluntary nature of the scheme means that trust is absolutely critical to the long term sustainability of the insurance scheme. It is therefore essential that mechanisms are put in place to prevent misappropriation of these funds.

### **Implications of China's Current Health Care Situation**

High medical costs and the inaccessibility of medical services have broad implications for rural society in China. The primary consequence of the current state of the health care system in rural China has been declining health indicators and poorer health outcomes. In addition it has led to greater rates of rural poverty (because of medical impoverishment) and exacerbated the gap between rural and urban populations. This has contributed to the numerous instances of social unrest in rural China. Additionally, people must save large portions of their incomes for fear of high medical bills if they get sick or injured (Meng et al. 2000). If the government hopes to spread the strong economic growth enjoyed along the coast to the majority of the population in inland rural areas, it will have to find an effective solution to the health care question. Health financing that will allow rural Chinese access to needed medical care is therefore crucial to achieving the central goal of economic development and long-term growth in China.

#### *Poverty*

Due to rapid economic growth and rising incomes, the overall poverty rate in China has declined in recent years. However, in rural areas, the lack of medical insurance and rapidly rising medical costs have caused financial hardship for many families. Since the 1980s, medical costs have risen more quickly than GDP. At the same time, the government share of the total spending

decreased from 36.4% in 1980 to 15.5% in 1998. During that time period, the private share of total spending increased from 23.2% to 57.8% (Liu et al. 2003). Therefore, families have been forced to bear a greater share of medical expenses at the same time that costs have been rapidly rising.

According to a study by Liu, Rao and Hsiao (2003), illness is the second most common cause of poverty in rural China after lack of labor. Using data from the 1998 China National Health Services Survey, they found that based on reported statistics alone, the overall rural poverty rate was 7.22% and that over three of those percentage points could be attributed to health costs. Therefore, the number of rural households living below the poverty line was 44.3% higher than it otherwise would be due to medical spending. This perpetuates the cycle of lack of affordability and poor access to care.

### *Rural-Urban Gap*

China's focus on growth along the coasts has led to a large urban-rural income gap. There is also a wide gap in provision of social services between the regions. In 1993, only 10% of the rural population had medical insurance compared with 50% of urban residents (World Bank. 1997). Meanwhile, during the 1990s, only 20% of the government's public health spending went to the rural health system that served 70% of the Chinese population (Jackson et. al. 2005). Currently, a national insurance program is being put in place for urban residents that is far superior to anything seen in rural areas. As migration between rural and urban areas has increased and rural residents have become more aware of their inferior position, opposition to government policies has grown.

### *Social Unrest*

While there have been numerous incidences of civil unrest in rural China in recent years, rural healthcare is the issue of greatest concern to the rural population and has led to a considerable portion of the unrest. The Chinese government is very interested in improving rural healthcare provision to curb unrest but at this point has been unable to do so. As the disparity between rural and urban populations continues to widen and rural citizens become increasingly aware of their situation and the government's role in causing the disparities, social unrest is only expected to increase.<sup>2</sup>

### *High Savings Rate*

China's savings rate is 46%. This figure is twice that of India and well above that of the United States which does not save at all. According to Li Chao, a spokesman for China's Central Bank, "People make a large amount of precautionary savings for pensions and medical care, due to the incomplete social security system."<sup>3</sup> The major consequence of people saving in order to cover future medical costs is that the money is not being invested. This slows the country's economic growth. While China's rapid growth rate has obscured drags on growth such as the high savings rate, the government has taken notice. Currently the government is taking measures to improve social services including health care in order to reduce savings. The government hopes that measures to reduce the savings rate will help increase domestic consumption, which the government expects to drive its future economic growth.

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<sup>2</sup> Joseph Kahn, meeting at the New York Times Bureau Office, Beijing, China, March 1, 2006.

<sup>3</sup> Quoted in Su Bei, March 29, 2006, "Nation to Cut Back Savings Rate," *China Daily*, [http://www.chinadaily.com.cn/bizchina/2006-03/29/content\\_554909.htm](http://www.chinadaily.com.cn/bizchina/2006-03/29/content_554909.htm), accessed 4/2/06.

## **Recommendations**

There are several things that can be done to improve the organization, financing and delivery of health care services in rural China and by extension the health of China's rural residents.

### *Program Evaluation*

There is a lack of comprehensive and thorough literature on the current state of China's rural health care system. Even though the rural health care challenge affects more than 800 million people and has dramatic societal implications (such as social unrest, savings rate, etc.), many town-level schemes are seemingly undocumented.. The Chinese government is interested in restructuring this system, but it does not seem to have performed a thorough audit. Therefore, one recommendation is for the Chinese government itself (or a qualified international organization) to perform a rigorous evaluation of all existing rural health care schemes. This "Rural Health Care Review" would not only include details of schemes from every region, but it should also entail surveys of rural residents' perceptions of the health care system. The researchers should interview people to determine why they do or do not participate in a health care scheme, and, if they do not, what would convince them to do so. A significant effort should be made to gather statistics about spending on medical treatments and the amounts spent on different diseases. At the end of the "Rural Health Care Review", the researchers should develop criteria for successfully moving forward in advancing a rural health care system. This criteria could include an "Accessibility Checklist", which is a list of evaluative questions that determine whether the new proposed system is accessible for all rural residents.

Considering the enormity and importance of developing a functional rural health care system, the resources spent on implementing a major program evaluation would be well worth it.

### *Increase Funding*

As earlier discussed, the drop in government funding was a major factor contributing to the travails in rural health care. Clearly as has been demonstrated in developed countries such as the US, there are areas where it is unprofitable to situate health care facilities (especially in rural villages) and a free market system is therefore unlikely to provide them. The costs must arguably be borne by the government. In addition there is probably no substitute for government funding of public health activities. The primary reason is that these are public goods. For example, the market system typically under-produces immunizations because if people at risk get immunized, others enjoy the protection and therefore see no need to pay for immunization. This makes such activities unprofitable for private enterprises. The recent SARS and Bird Flu scares underscore the importance of government investment in disease monitoring and surveillance systems.

In addition, the present government contribution of 10 Yuan (which is the same as the individual contribution) is insufficient. This has implications for the long term financial sustainability of the new Cooperative Scheme. Inequalities between rural regions means that some degree of interregional transfers are called for – an activity that only the central government can perform by subsidizing the poorer regions. There is also a need for the government to subsidize the costs for the poorest individuals. The rural Medical Assistance scheme which is supposed to do this has so far proved remarkably ineffective.

### *Capacity Building*

There are relatively uncomplicated solutions for some of the problems with the current CMS that have earlier been discussed. Managerial and financial training can be instituted for local manager of these schemes. This training can be provided in conjunction with the World

Bank (which has the expertise) and is funding pilot schemes in rural China. Alternatively, the level of organization of the scheme can be moved up to the provincial level where technical capacity is better. This will also have the effect of increasing the size of the risk pool, the advantages of which have already been highlighted.

### *Mandatory Participation*

As the Chinese government develops the new CMS, it should include policies of mandatory participation. This paper describes how 90% of rural residents are uncovered by health insurance, which leads to a number of dramatic problems. In urban areas, where mandatory schemes are being implemented, many of these same problems do not exist.

Mandatory participation would enlarge the risk pool. The small risk pool problem is due to small schemes that are being run on the village-level. The government should incorporate these various village-level schemes into a central system. Though administration could exist on the community level as well, the funding would be pooled nationally. Another reason for the small risk pool is farmer's mistrust of the credit system. By making the scheme mandatory, rural residents will be forced to participate. Of course, this runs a great risk if the system is not administered properly. Rural residents will be resentful that they were forced to pay for a dysfunctional system. However, the chance that the system will be successful is greatly increased by making it mandatory. In addition, the government should carefully monitor the system for proper administration. A mandatory scheme makes a national CMS plausible because it would ensure a large enough pool and a diversity of risks within the fund.

Adverse selection is also caused by the voluntary nature of the current CMS. Healthy individuals, who are good risks, opt out of participating because they are able to do so. This

leaves only the bad risks in the fund. The most effective way of changing this trend is mandatory participation.

## **Conclusion**

China's rapid economic progress has changed the society in a number of fundamental ways. A once strong rural health care system has been undermined. Though a new CMS has been introduced, it faces a number of problems, such as adverse selection and weak administration. The ensuing insecurity of rural residents has drastic societal implications, such as civil unrest. In order to bolster the chances of the CMS's success, this paper has presented some ideas. For example, China's government should take steps for a more thorough and systematic program analysis of the rural health care status.

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