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Ever since the collapse of the once successful Rural Cooperative Medical System (RCMS) in the early 1980s, when China transformed its system of collective agricultural production to private production, many rural communities, especially the poorer residents, have faced several major problems. In 1993, insurance coverage for rural residents was already low, at 12.8%. By 1998, only 9.5% of the rural population was insured. User charges have effectively blocked access for many rural residents who lack adequate income to purchase basic health care when needed.

Impoverishment due to medical expenses is also a serious problem, which begs the question: why has there been no vigorous development of the rural health insurance system in China despite the country's rapid economic growth? This paper analyzes the major underlying reasons for the lack of rural health insurance in China. We found that lack of demand for the voluntary community financing schemes and inadequate government policies are the two major hindrances. Recently, the Chinese government announced a new rural health financing policy that relies on 'matching-funds' by the central and local governments as well as household contributions. The potential for success of this new model might be inferred from China's past experiences, as well as from the pilot projects that are underway.

Key words: health insurance, rural, financing, government, policy

Introduction

About 70% of China's 1.29 billion population live in rural areas, and are primarily engaged in agriculture. The problem of how to finance health care for people working in the informal sector, such as in agriculture, has yet to be resolved (Bennett et al. 1998; CMH 2002). Today, the majority of China's rural populations do not have any health insurance. According to the 1998 National Health Services Survey, the poverty headcount for the whole rural sample is 7%. Out-of-pocket spending on health care has raised the headcount by more than 3 percentage points. In other words, medical spending raised the number of rural households living below the poverty line by 44% (Liu et al. 2001). Comparing the results from the 1993 and 1998 national survey, the problem of medical impoverishment appears to have become more pronounced over time (MOH 1999). Therefore, providing rural health insurance coverage seems to be not only an important health protection measure, but also an important poverty reduction strategy (World Bank 1997, 2000). But why has China not yet developed a viable rural health insurance system? To answer this question, a brief historical review is in order.

China was the first large nation in the world to develop a nationwide rural health insurance system in the 1970s. Its community-based rural health financing and provision system, called the Rural Cooperative Medical System (RCMS), was an integrated part of the overall collective system for agricultural production and social services (Zhang 1992). Under the RCMS, the financing of health care relied on a pre-payment plan. Most villages funded their RCMS from three sources:

(1) premiums – depending on the plan's benefit structure and the local community's economic status, 0.5 to 2% of a peasant family's annual income was paid to the fund;
(2) the collective welfare fund – each village contributed a certain portion of its income from collective agricultural production or rural enterprises into a welfare fund, according to State guidelines;
(3) subsidies from higher-level government structures in most cases, this subsidy was used to compensate health workers and purchase medical equipment.

By the mid-1970s, about 90% of China's rural villages, called 'communes' at the time, were covered by RCMS schemes. This community financing and organization model of health care was believed by many to have contributed significantly to China's success in accomplishing its first 'health care revolution' (Sidel 1982, 1993; Chen 1989; UNDP 1998).

Since the 1980s, China has moved away from central planning towards a market economy, a trend that is also reflected in the health system (Jamison 1984; Hsiao and Liu 1996). Along with growing commercialization within the economic sector, access to health care has been increasingly dictated by ability to pay. In rural areas, the transition from agricultural collectives to what is termed the 'household responsibility system' weakened the financial base of the cooperative medical system, contributing to the collapse of RCMS schemes in the majority of rural communities. In 1993, insurance coverage for rural residents had fallen to 12.8% (MOH 1994). In 1998, only 9.5% of the rural population were insured (MOH 1999). The decrease in insurance cover for the rural population has taken place despite escalating medical costs (see Table 1). Internationally, as a

Table 1. Medical costs and insurance coverage in China

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

Sources: [a] Ministry of Health, 2000 National Health Statistics. [b] Ministry of Health, 1993 & 1998 National Health Services Survey.

country's income increases, the share of that country's total health expenditure by the government also tends to increase (CMH 2002). But in China, a country with growing income, total health spending as a percentage of GDP increased from 3.2% in 1980 to 4.8% in 1998, yet the government share of the total spending decreased from 36.4 to 15.5%. Over the same period, the private spending share increased from 23.2 to 57.8% (HEI 2000). Since the collapse of the once successful RCMS in the early 1980s, many rural residents, especially the poor, have faced several major problems. User charges and high direct costs now effectively block access for the many people who lack sufficient income to purchase basic health care when they need it. Moreover, medical expenses have also caused financial catastrophe for many rural families (Yuan and Wang 1998; Liu et al. 2001).

Ever since the inception of the economic reform programmes in the early 1980s, the attitude of the Chinese government towards rural health financing can best be described as *laissez-faire* (Liu et al. 1995; Bloom and Gu 1997). The dominant thinking of policymakers has been that voluntary community financing schemes would emerge with economic growth. In light of the failure of this to occur, the Chinese government has finally taken an active role in supporting the development of a rural health insurance system; on 29 October 2002, the China National Rural Health Conference was held in Beijing (Yin 2002). Altogether, nine major national policies to support and strengthen the rural health care financing and delivery systems were announced at the meeting. These policies ranged from establishing new forms of the RCMS to upgrading rural and township health centre facilities. The most important among these was the decision to develop new forms of RCMS supported by different levels of government (central, provincial, prefecture and county level government).

This paper identifies the major reasons underlying the lack of rural health insurance cover in China in the past, and attempts to predict the likelihood of success of the new policy. It critically reviews the background that led to the new policies and assesses their likely impact. It first reviews major difficulties faced by the traditional RCMS, and then discusses the failures of the government's rural health financing policies preceding the 2002 conference. The paper concludes with important lessons that can be drawn from the history of China's rural health insurance system, for China and other developing countries.

The analytical framework

Globally, there are four main types of formal financing systems: government financing (usually tax-based), social insurance, private insurance and community financing such as the RCMS (CMH 2002). While both government financing and social insurance require strong public sector action, development of private insurance largely depends on initiatives of insurance companies, which are driven primarily by profitability in the market. Since the 1980s, the Chinese government has adopted neither revenue-based financing nor a social insurance system for the rural population. By default, rural health financing in China has been left to market forces. Economic theory proposes that if an insurance market is to be developed, there has to be effective demand and adequate supply, subject to economic and social constraints (Phelps 1992).

To analyze the major reasons for the lack of insurance cover in rural China, a simple analytical framework (Figure 1) was adopted which depicts the development of rural health insurance as a result of interaction between demand and supply, and relates the level of demand and supply of rural health insurance to the socioeconomic conditions of the local communities. Government policies can also influence the outcome through financing and regulation. Following this framework, the paper first examines demand-side and supply-side issues. It then discusses the inadequacies of past government policies.

Challenges facing the development of a rural health insurance system in China

Demand-side issues

Insofar as a health insurance system is not compulsory, people's ability to pay and willingness to participate/contribute is vital for sustaining the system. Therefore, it is not surprising that higher-income regions in China have higher insurance coverage than lower-income regions (Wang 2001). Aside from ability to pay, there are other factors affecting people's willingness to participate in voluntary risk-sharing schemes.

Using data from a 10-county study in China, Liu et al. (2000) found that people's demand for pre-payment schemes was significantly correlated with their health care needs, perceived quality of health care facilities and expected

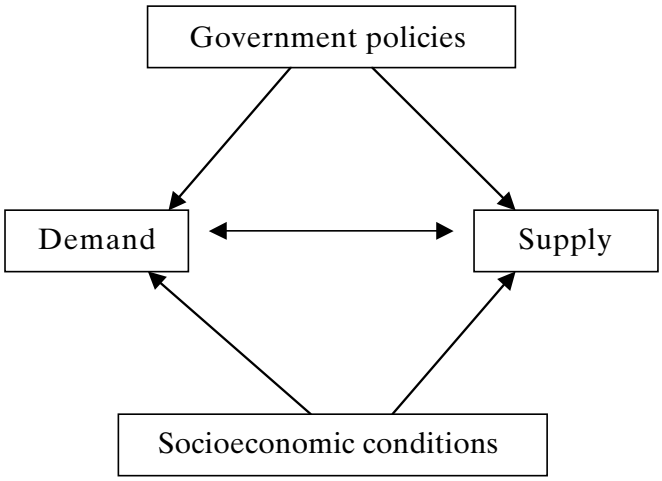

Figure 1. Major factors affecting development of rural health insurance

impact of the RCMS on health care access and quality. Major challenges on the demand-side include problems of 'adverse selection' and 'moral hazard' (Pauly 1974). Adverse selection refers to the problem of information asymmetry in voluntary insurance contracts. The insurance buyer may know that he or she is likely to contract an illness, but the insurance provider cannot know that. As a result, the insurance scheme may end up enrolling many high-risk members. The 10-county study clearly indicated that this has been a serious problem in China's rural health insurance development. 'Moral hazard' refers to the risk that existence of a contract will cause participants in the contract to change their behaviour from what it would have been in the absence of the contract. A number of studies have found that rural residents in China who are insured have both a higher probability of health care utilization and higher costs per episode of care than their uninsured counterparts, controlling for other factors (MOH 1999). The 10-county study indicated that the elderly and the chronically ill have a higher probability of enrolling in the community financing schemes, compared with the young and healthy (Hu 2000, 2001). Beside expenditure fluctuations, instability of the rural insurance schemes is also related to fluctuation of the farmers' income (e.g. caused by flood or drought) (Liu et al. 2000).

Supply-side issues

There has often been a mismatch between demand and supply in China's rural health insurance development. Since community financing schemes only provide one benefit package for the whole community, it may not suit the diverse needs of the population. Due to their limited ability for fund collection, most of the RCMS schemes in China only provide coverage of primary health care services (Wang 2001). Meanwhile, the need for insurance coverage for catastrophic illness remains largely unmet. Continuation of the RCMS could improve access to primary health care for many rural residents. However, alternative methods need to be explored, including hospital-based medical assistance programmes, if it is deemed necessary for the rural residents to be protected from catastrophic medical expenses. Many of the RCMS schemes operate at the village level, which provides a very small risk pool. Therefore, either the risk pool needs to be increased or some reinsurance arrangement at county and higher levels should be established to help overcome this problem.

Initiating and managing a rural health insurance system is also a complicated task, involving benefit design, social marketing, fund collection, contracting providers, fund management, quality and costs monitoring, and provider payment (Bennett et al. 1998). Many rural communities, especially in low-income regions, do not have the required organizational capacity (Jiang 2003). Therefore, the establishment of rural health insurance schemes in China requires both financial and organizational support from the government.

Major issues around government policies

The need for government support

China's experiences indicate that strong government support is necessary for establishing and sustaining the wide coverage of a rural health insurance system. Some policymakers, especially those who support a 'voluntary' community-based rural health protection system, have hoped that with economic growth, people's demand for health protection would increase, and that this increasing demand would automatically lead to community initiatives to address the health protection issues (Yuan and Chen, 1994). This has not yet happened. Despite steady economic growth since the 1980s and the announced policy direction encouraging the development of the RCMS in 1996 (The State Council 1997), the majority of the rural population remains uninsured (Liu et al. 2003).

All the successful RCMS schemes that have survived have done so with strong government backing (Hu 2001; Jiang 2001; Wang 2001). There are several arguments for the need for government support. First, increasing inter-regional inequalities in economic and social development imply that some communities will certainly be left behind if the development of rural health insurance systems is subject to the discretions of the local communities. There are always communities where the stock of financial and social capital is too low for any meaningful health protection system to be established. Secondly, establishing a rural health protection system in China, where the market for health insurance is yet to be developed, requires that people trust the institutions that are in charge of the system and that the institutions have sufficient authority and skills for fund collection and risk-transfer (Bloom and Gu 1997). Except for coastal regions or those regions with well developed township and village enterprises, many rural communities lack alternatives to government organizations for handling the complicated process of initiating and managing rural health insurance (Li and Hong 1995). This is especially so in poor rural areas. Therefore, lack of organizational capacity constitutes an important challenge for establishing rural health insurance.

By virtue of their high poverty rate, China's poor rural areas

do not have an adequate supply of financial and human capital (Bavieva and Milante 2000). Many people need health insurance protection, but with a meager income of less than a $1 a day (SSB 2002) they can hardly make ends meet, let alone purchase health insurance. Government needs to provide financial assistance to the poor for them to be able to join the RCMS. Meanwhile, local governments (township and county governments) face problems of budget shortfall (He 2001). Sometimes government officials working in poorer regions do not even receive their salaries on time (Li 2001). For the reasons above, local resources alone cannot finance a comprehensive package of RCMS benefits. Moreover, many young and educated people migrate to find jobs in the cities or to work in government. There are very few social organizations existing in the poorer regions (UNDP 2002). Due to the lack of alternative organizations that can take on the role of RCMS organizers, RCMS schemes would have to be initiated by the local governments in many cases.

Ever since the fiscal decentralization reform in the mid-1980s, local governments have been given increasing responsibility for developing the local economy and social infrastructure (Saich 2001). Therefore, local governments have the discretionary power to decide whether a RCMS scheme is to be established, continued or disbanded. Because of their increasing budgetary obligations and pressures to raise extra-budgetary funds to meet those obligations, local governments in middle- and low-income regions do not have a strong incentive nor sufficient resources for promoting RCMS schemes (Oi 1999). In conclusion, for the foreseeable future, the central government has an important role to play in developing the rural health insurance system, both as an enabler and as a supervisor.

Support for one rural sector

Until late 2002, however, the role played by government – especially by the central government – in developing China's rural health insurance system has been minimal (Gao et al. 2002; Kaufman and Jing 2002). Recent years have seen increasing policy attention paid to social security issues, because without an effective social security system, China's deeper and wider economic reform programmes cannot go forward (Hussain 2003). However, social security reforms, including health insurance system reforms, have been limited to the urban sector. The Ministry of Labour and Social Security, which was established in 1998 to take charge of social security, is only responsible for health care financing for urban workers. The administrative responsibility for financing health care for the 800 million rural population, especially for the rural poor, remains undefined (Liu et al. 2003). Why has there been a lack of government support for rural health protection systems? An ideology shift, institutional constraints and misconception of some key issues may explain the observed government inaction.

Ever since the inception of economic reforms, the dominant ideology guiding public policies gradually shifted from the fixation on an egalitarian society under Mao to Deng Xiaoping's economic development dominated agenda at the expense of equity (Li and Hong 1995). Therefore, government's top priority has been and continues to be economic growth. Social sector development including health care has been low on the public policy agenda. Furthermore, the Chinese government accepted the principle referred to as the 'family responsibility system' for the rural sector (The State Council 2001). At its heart, this principle holds that the family is the first line of social protection. As a corollary, government becomes involved only when the family cannot take care of its own, and when government action can be effective. As a result, government takes responsibility for such public goods as vector control, immunization and health education, etc. Local governments also continue to provide subsidies to support basic salaries of some rural health centre workers. Still, the responsibility of paying for health care in rural China is largely left to the families.

Further, economic reforms in China have created a new institutional context for government to fulfill its roles in the society. A system of fiscal responsibility was introduced in the early 1980s and lasted until 1994 (Forster 2001). This reform mainly pertained to the relationship between the central and provincial government. Each province signed a contract with the central government, stipulating the amount of funds that had to be forwarded to the centre annually. Revenues generated over and above this stipulated sum could be retained in whole or in part for the provincial usage. Under this system, the provinces have more resources at their disposition.

By the late 1990s, however, the shortcomings of the contract responsibility system, especially in terms of inhibiting the centre's ability to redistribute resources, had become apparent. The centre has since tried to rectify the situation by launching a series of reforms. In 1994, a 'tax sharing' system, which formally delineates local and centre taxes, was introduced to replace the contract responsibility system. The main aim was to strengthen the centre's financial position and sever the direct link between the revenues of the local government and those of the enterprises located within their respective geographical jurisdictions. Since the late 1990s, the priority in tax reforms in China has been given to consolidating agricultural taxes and fees, aimed at reducing the tax burden of China's farmers (Deng 2001). As the central and provincial governments have been in the process of sorting out their respective responsibilities in tax and spending, it is not surprising that there has been a lack of clear division of responsibilities within government in relation to health protection for the 800 million rural population.

Central government concerns regarding rural support

There are two major concerns for the central government in relation to rural health protection: budget implications and the tax burden for the rural farmers (Fan et al. 2002). First, having experienced many difficulties and challenges in developing the urban social insurance system, the government hesitates to take on the seemingly larger challenge of establishing health protection systems for the 800 million rural residents (Liu 2002). However, experiences of developing the urban health protection system, though

informative in certain respects, need not apply totally to the rural sector.

To begin with, no one, certainly not the rural farmers, expects the government to give the same kind of financial support to the rural health protection system as that to the urban system (Li 2002). Unlike other former socialist countries such as Russia that provided a nationalized system of welfare, with access to public-funded health care for all the citizens, China's health systems for the urban and rural populations were separate. The two systems differed not only in benefit packages, but also in funding sources. Under the old planning system, urban workers received low wages and part of their deferred compensation took the form of entitlement to a set of benefits in kind, including housing and health insurance. This is why government felt obligated to honour the social contract by taking care of the urban pensioners and unemployed workers of the State Owned Enterprises (SOEs) when the SOEs underwent reforms or simply closed down. Large enough numbers of the SOE workers not receiving their paycheque or reimbursement for their medical bills could often lead to social unrest.

By contrast, the majority of the rural residents had never received any benefits from government in terms of entitlements (Zhu et al. 2002). The RCMS is a community-based risk-sharing system, and largely funded by the farmers' own financial contributions. Therefore, there has never been a formal or implicit social contract between the rural people and the government to provide guaranteed health protection benefits. This explains why there was no social unrest as a result of 600 million rural residents becoming uninsured, when the RCMS collapsed. Furthermore, socioeconomic conditions are different across rural areas, and thus the needs for government support are different. While rich rural areas may not need financial support as much as policy and regulatory support, middle- and low-income regions need financial assistance. Thus, the government should not be concerned about financing health care for the whole rural population; instead, it needs to and should be helping the most needy and vulnerable.

In relation to the tax burden on rural farmers, given the size and need of China's rural population relative to the government budget, a significant portion of the funding for the rural health protection system still needs to come from household contributions (Jiang 2003). However, central government is concerned that collecting household contributions for a rural health protection system would further increase the already high tax burden for the rural farmers (Deng 2001; Forster 2001). China's tax system is still a very centralized one. All tax laws are enacted by central government. Even legislation governing local taxes is generally promulgated by central government for local implementation. Local governments have virtually no fiscal autonomy and no taxing power. In the meantime, local governments are required to pay for various expenditures. To raise revenue to cover the expenditures, local governments have adopted numerous 'non-taxation', 'extra-budgetary' measures such as collecting administrative service 'fees'. In that process, local taxes in the name of various 'cost-sharing' measures and 'fees' have been increasing, generating financial burden for the farmers.

One of the major objectives for the rural tax reform of 2000 is to reduce the tax burden faced by the rural farm families (Han 2000). Under the new system, earmarked contributions to the rural health protection system can only be collected at the village level when the contributions are totally voluntary and establishing a risk-pool at the village is approved by the villagers. This new tax policy, if enacted, would pose the greatest difficulty for establishing China's rural health protection systems, because the local governments (e.g. township government) would have no power to collect contributions for rural health protection purposes (Han 2000; Wang 2001).

Contrast between urban and rural policies

To illustrate how inadequate China's rural health financing policies have been, Table 2 compares government policies on the urban health protection system, which is organized and heavily subsidized by the government, with those on the rural system. A particularly disturbing finding from the table is that the government has applied a 'double standard'. For example, to avoid tax evasion and adverse selection, the urban social health system is made a compulsory system. By contrast, current policies dictate that the rural health protection system can only be developed on a voluntary basis (State Council 1997). On one hand, realizing the 'law of large numbers' in stabilizing insurance funds (Ron et al. 1990), government required that the risk-pool for the urban health protection system should not be smaller than the prefecture or city. On the other hand, the only legitimate collective body that is allowed to collect contributions for a rural health protection system (thus sharing risks among the community members) is the village – the smallest unit of all the rural organizations beside family. The Ministry of Labour and Social Security is only responsible for health

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

care financing for the urban workers through social health insurance schemes. The administrative responsibility for financing health care for the 800 million rural population, especially for the rural poor, remains undefined. Local governments, being pre-occupied with income generation (not with social spending) and perceiving people's ability and willingness to participate in RCMS to be low, often consider RCMS as a difficult course with little payoff (Liu et al. 2000).

Conclusion

This paper has analyzed major factors affecting the development of a rural health insurance system in China. These factors include lack of ability to pay by low-income families, adverse selection among those who are able to pay and organizational capacities for running RCMS schemes. But by far the most important issue is the weak role played by the government. We argue that without strong government support, China will not be able to establish a sustainable rural health insurance system.

Based on the recognition that many rural communities cannot establish the needed rural health insurance schemes by themselves, the government recently changed its previous policy of requiring RCMS to rely totally on local resources. The new policy stipulates that for the 400 million rural residents who live in China's midland and western regions, the central government will provide 10 yuan (US$1.25) premium subsidies per capita, to be matched by at least 10 yuan contributions from the provincial and lower levels of government, and at least 10 yuan contributions from the individual families (Yin 2002). Twenty yuan (US$2.50) per capita support from the government may not seem very much, but for the past 30 years, the Chinese government has paid almost nothing to support the purchase of health care services by the rural farmers. In that context, the new policy represents a breakthrough, and is expected to help increase effective demand for rural health insurance schemes.

However, several issues remain with the new policy development. First, government matching funds are conditional on the private contributions of the rural residents. This may be a good deal for those who are able to pay the minimum 10 yuan contribution, but what about the poor who cannot afford to pay the minimum premium contribution? If their premiums are to be exempted, who shall bear the costs – the central or the local government? Secondly, the new policy is supporting *new forms* of RCMS schemes. The government envisioned the new forms to include a new benefit structure that emphasizes hospital insurance coverage and increasing the risk pool to the county level. China has had little experiences in operating RCMS schemes at the county level and in providing hospital insurance coverage for the vast rural populations. How can the hospital costs be controlled? How should China deal with the variations of financial and organizational capacities across counties? Finally, the new policy still makes the RCMS schemes totally *voluntary*. It is unclear how the known problems such as adverse selection would be effectively addressed under a voluntary system. Typical of China's general approach to system reforms, the new policy stipulates that starting from 2003, each province should select two to three counties to pilot the new financing models of RCMS before going to scale nationally.

As China continues this process of implementing its new rural health financing policies, its experiences should be closely monitored and evaluated. At present, very few countries have succeeded in developing a nationwide community financing system with a comprehensive benefit package (Bennett et al. 1998; CMH 2002). The success or failures of the public-private partnership model for financing rural health insurance will not only have direct impact on the welfare of China's rural population, but also provide important lessons for other developing nations regarding health protection in the informal sector.

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