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Reforming China's urban health insurance system

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Abstract

China's urban health insurance system is mainly consisted of labor insurance schemes (LIS) and government employee insurance scheme (GIS). LIS is a work unit-based self-insurance system that covers medical costs for the workers and often their dependents as well. GIS covers employees of the State institutions, is financed by general revenues. Since 1980s, China has implemented series of health insurance system reforms, culminating in the government's major policy decision in December of 1998 to establish a social insurance program for urban workers. Compared with the old insurance systems under LIS and GIS, the new system expands coverage to private sector employees and provides a more stable financing with its risk pool at the city level. Despite of these advantages, implementation of China's health insurance reform program is faced with several major challenges, including risk transfer from work units to municipal governments, diverse need and demand for health insurance benefits, incongruent roles of the central and regional governments. These challenges may reflect practical difficulties in policy implementation as well as some deficiencies in the original program design.

Keywords: China; Health insurance; Reform; Policies

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1. Introduction

Like many other nations undertaking health sector reform, China puts health insurance reform high on its policy agenda [1–5]. A new ministry, Ministry of Labor and Social Security (MOLSS), was created in 1997 to take charge of the reforms. In December of 1998, the State Council announced a major decision to establish a social insurance program for urban workers. This new system will replace the existing labor insurance schemes (LIS) and government insurance schemes (GIS) in the cities. The program aims to provide a basic benefit package to all urban workers, including employees of both public and private enterprises. Major factors underlying the reforms include the need to carry out deeper and wider economic system reforms, namely reforms of the state owned enterprises (SOEs), and the need to expand insurance coverage in face of the rapid medical cost escalation.

China's social security system, of which health insurance is a component, was founded in the 1950s. Historically, Chinese State enterprises or work units have operated as semi-enclosed communities, producing goods or services as well as providing either free or at low prices a wide range of services to their current and retired employees and often their dependents as well. The cash wage was just one component of a package with a wide array of benefits in kind [6], including housing, outpatient and, in large enterprises, also inpatient medical care. LIS was a work unit-based self-insurance system that bore all costs of medical treatment, medicine and hospitalization. GIS was the public medical system for employees of the Government and State institutions, under which medical costs were covered by government budgetary allocation. The extended social role of Chinese State enterprises has traditionally bound much of the urban labor force to their respective work units (danwei). This bond is perceived increasingly as a major barrier in the restructuring of the SOEs, including the closure of the ones with no or little chance of survival in a market economy. Confronted with a drastic worsening of financial position in recent years, many SOEs are forced to default on their social obligations to pay the workers' medical bills. As a result, the urban workers no longer perceive employment in SOEs as a secure guarantee of income for life complimented with generous benefits in kind. Current workers, retirees and workers who become unemployed demand assurance that their basic health care needs will be met. The absence of such a social protection program has slowed down the reform of SOEs.

Meanwhile, several major problems in its health sector helped further heighten China's sense of urgency for insurance system reforms.

The prices of medical services and drugs have become unaffordable for many groups of the population. Costs of health care have been rising much more quickly than the growth in personal income: urban income per capita has risen 18% per annum between 1989 and 1997, while the costs of outpatient care increased at 26% per year and per admission at 24% per year. Studies show that, on average, 20 and 23% of the urban and rural populations, respectively, forego inpatient hospital services recommended by health professionals because they cannot afford them [7].

Spending for medical services and drugs has become a major generator of poverty. Studies show that 25% of households living in low-income counties who had any health services in a given year had to sell their meager assets or borrow money to pay for their medical expense [8].

An increasing number of urban residents do not have adequate health insurance. According to the 5-yearly national household surveys, the proportion of the urban residents without health insurance rose from 27.3 to 44.1% between 1993 and 1998 [7]. There has been a lack of risk pooling across enterprises or across local governments. Each organization under the original GIS and LIS systems is self-insured. If an enterprise is running a deficit, it may not be able to reimburse employee beneficiaries for their medical expenditures, rendering those individuals effectively uninsured. On the other hand, fulfilling the GIS and LIS commitment to enrollees often imposes a heavy financial burden on enterprises, hampering seriously their ability to compete in a competitive market economy. Policymakers realized that unless these problems were addressed, rapid health cost inflation would continue to outstrip China's ability to pay, jeopardizing continued improvement of urban residents' health status and affecting social stability.

Aimed at dealing with these issues, China has implemented a series of reforms since 1980s. The latest policy objective is to establish a nation-wide social insurance system, which pools risks for all the urban workers, including both public and private sector employees, at the city level. This new system will replace the LIS and GIS. The State Council required that 80 million urban workers be enrolled by the end of 2001. The implementation process, however, has been slow. Provinces and cities are confronted with multitude of problems, which reflect practical difficulties as well as possible deficiencies of the original national program design. This paper intends to provide a systematic analysis of China's health insurance system. It is structured as follows. Section 2 provides a framework for evaluating the Chinese experience. Section 3 reviews the historical development of China's health insurance schemes. Section 4 gives a detailed description of the current reform initiatives. Section 5 examines the major challenges and concludes with some policy recommendations.

2. Health insurance and health system goals: an analytical framework

In it's World Health Report 2000, WHO defines a health system to include 'all the activities whose primary purpose is to promote, restore or maintain health' [9]. There are three fundamental objectives of a health system.

Improving the health of the population they serve;

responding to people's expectations; and

providing financial protection against the costs of health care interventions in illness.

In order to achieve these goals, there are formidable costs that need to be met. Health care expenditures have risen from 3% of world GDP in 1948 to 7.9% in 1997 [9]. This dramatic increase coupled with growing awareness to provide accessible

health care to the world's population now causes societies to look for alternative health financing arrangements.

Health insurance serves as an effective intermediary between providers and end users, linking planning and budgets to service delivery. The purpose of health insurance is to provide financial resources to the health system, making sure that individuals have adequate access to public health and personal health care, and setting financial incentives for providers to deliver healthcare services in a cost-effective way. Health insurance thus plays three main functions: resource mobilization, risk-pooling and provider payment. Health insurance affects the three goals of health systems through intermediate outcomes. Financing policies have direct effects on the intermediate goals of the health system, which include access, quality, equity in financing and allocative efficiency, all of which in turn contribute to the three main goals described above.

First, a health insurance system provides financial access to available services. This helps increase utilization of healthcare services, which in turn contributes to better health status. Second, quality of services, as an intermediate criterion, is valuable for its role in health improvement as well as achieving consumer satisfaction. Important in this respect is the factor of perceived quality of care by consumers, which affects demand for services as well as demand for health financing systems. Third, equity in financing addresses the important question about who gets the benefits and who bears the costs. The two major sources for concerns about equity in financing are financial risk protection and equitable distribution of healthcare services. Therefore, equity in financing is usually defined as 'paying for healthcare according to one's ability to pay' [10].

Therefore, from an equity point of view, one of the most important functions of a financing system is providing mechanisms for financial risk protection. Financial risk protection does not necessarily involve protecting everyone form all economic losses due to illness. Rather, it aims at protecting those who are at major risk of 'medical impoverishment' due to significant healthcare costs. To exemplify this, a well paid skilled worker has some loss of welfare in the event of healthcare expenses incurred to him, as compared with the impoverishment faced by a poor farmer who loses his farm or livestock to pay for his medical expenses. Medical expenditure always has a skewed distribution—a small proportion of the population has disproportionately large share of the total spending. That is why we need risk pooling, which transfers payment from the healthy to the sick, and, depending on the configuration of the system, from the wealthy to the poor. In the following sections, we use this framework to examine the Chinese experience in terms of ascertaining the extent, to which China's urban health insurance systems and reforms helped achieve the intermediate and final goals of the health system.

3. Health insurance reform in China: historical development

Reforms of China's health insurance system are brought about by socioeconomic changes as well as due to the need to correct the health system deficiencies. Over the

past four decades, GIS and LIS have played an important role in providing China's urban working population with health protection, thereby contributing to economic development and social stability. Several aspects of the original schemes, however, contributed to China's recent rapid health care cost inflation and inefficient resource allocation. GIS and LIS are third-party insurance, providing comprehensive benefits with minimal cost sharing to constrain beneficiaries on their consumption of medical services. Beneficiaries can receive largely free outpatient and inpatient services, except for dependent beneficiaries, who are reimbursed 50% for their health expenditures. Without any or limited consumer financial responsibility for the health services they utilize, these urban insured have no incentive to seek the most cost-effective health care. Moreover, except for employees in large enterprises with their own hospitals and/or clinics, both GIS and LIS beneficiaries seek medical services from public hospitals, which are usually reimbursed on a fee-for-service basis according to a government-set fee schedule. Such a fee-for-service system gives providers incentive to over-provide services. Another major problem is the lack of risk pooling across enterprises and across local governments. Each organization under the original GIS and LIS systems is self-insured. If an enterprise is running a deficit, it may not be able to reimburse employee beneficiaries for their medical expenditures, rendering those individuals effectively uninsured. On the other hand, fulfilling the GIS and LIS commitment to enrollees often imposes a heavy financial burden on enterprises, seriously hampering their ability to compete in the market economy. Policymakers realized that unless these problems were addressed, excessive health care cost escalation would continue to outstrip China's ability to pay, jeopardizing continuing improvement of urban residents' health status and affecting social stability.

As a result, beginning in the 1980s, China implemented a whole series of reforms in the urban health insurance system. This reform process has gone through two major stages, the first from the early 1980s to 1991 and the second beginning in 1992 with city-wide pilot reforms [11].

During the first stage (1980–1991), the primary objective of reform was cost containment. Major reform measures include introduction of demand-side and supply-side cost sharing. These measures played a role in mitigating China's rapid health care cost escalation, relieving some of the financial pressure on enterprises, and decreasing the inequity of health care expenses between enterprises or government work units. However, these reforms were not complete and left many fundamental problems unsolved.

Beginning in 1992, the focus of health sector reform shifted to the more fundamental problems—especially increasing the level of 'socialization' or risk pooling—along with the original goal of cost containment. This shift took place along with a significant increase in the overall pace of social security system reforms. The linkage of a new social safety net to the further success of the economic reforms—especially SOEs reforms—has became increasingly apparent.

In early 1995, Jiujiang in Jiangxi Province and Zhengjiang in Jiansu Province formally began pilot city reforms that use a combination of individual savings accounts and social risk-pooling funds to finance medical expenditures. These reforms address the issue of inadequate risk pooling through reform from enterprise self-insurance to city-wide risk pooling for catastrophic expenses. Before an individual can access the social risk-pooling fund, however, he or she must first pay 'deductibles' from a first tier of individual medical savings account and a second tier of direct deductible equal to 5% of annual income. The individual savings account and deductible in the amount of 5% of annual income are used with the intent to increase individual consumers' cost-consciousness when utilizing health care. The social risk pooling component of the new system draws on the strengths of social insurance to spread the risk of catastrophic medical expenses. This model combines individual responsibility with social protection through city-wide risk pooling for GIS and LIS beneficiaries

In December 1996, China held its first National Health Conference to develop major health policies for the next decade. Landmark decisions on policy directions were formally announced on January 15, 1997 in the form of 'Decision on Health Reform and Development by the Central Party Committee and State Council' [12]. Among the forty major decisions contained therein, the following key measures are closely tied to the guiding principles of insurance reforms: 'establish effective mechanisms for controlling health care demand and supply; actively seek scientific and appropriate payment methods to control excessive health care cost growth; gradually expand coverage to all the urban workers'.

4. Current reform initiatives

Since late 1990s, China has announced several major health sector reform initiatives, including the latest State Council guidelines for reforming China's medical and pharmaceutical sector [13]. The major objectives of the current reform initiatives are to (a) establish a basic social insurance system for the urban worker; (b) control medical costs escalation; (c) and improve efficiency and quality. The major strategy is to use financing reform as a lever to bring about reforms in other areas. Whether it is considered as a sub-system or not, health insurance system is closely related to both the health system (health protection) and the social security system (income protection). Therefore, performance of the new health insurance system will inevitably influence and be influenced by what is happening elsewhere in the health sector and social security sector.

In December of 1998, the Chinese government announced a major decision to establish a social insurance program for urban workers [14]. This new program will replace the existing LIS and GIS in the cities. Compared with the old GIS and LIS, the new program expands coverage to private enterprises and smaller public

enterprises. Self-employed and rural industry workers may buy into the program, but are not required to enroll. Workers' dependents are not covered.

4.1. Funding

The social insurance program is financed by premium contributions from employers (6% of the employee's wage) and employees (2% of their wage). Retired workers are exempt from premium contributions; the cost of their contributions is to be borne by their former employers. The Job Retraining Center at each SOE is responsible for paying the premium contributions of the 'redundant' workers—workers who have recently become unemployed due to industrial restructuring.

4.2. Benefit design

The social insurance program finances beneficiaries' health care services through three tiers: individual medical savings accounts (MSAs); out-of-pocket spending by beneficiaries in the form of deductibles; and social risk pooling. As shown in Fig. 1, total contributions are divided between two accounts: 3.8% of the employee's wage goes into the MSA, which enrollees can only use for health care expenses. 4.2% of the wage goes into the social risk pool fund (SRP), which is used to cover large medical expenses. Cities have the discretion to decide the SRP is to cover only in patient hospital expenses or catastrophic expenses, defined as expenditure that has exceeded certain large deductible.

In a typical social insurance scheme, enrollees are expected to pay all of their outpatient medical expenses out of the MSAs until the funds have been depleted. MSA funds unspent at the end of the year are carried over to the next year.

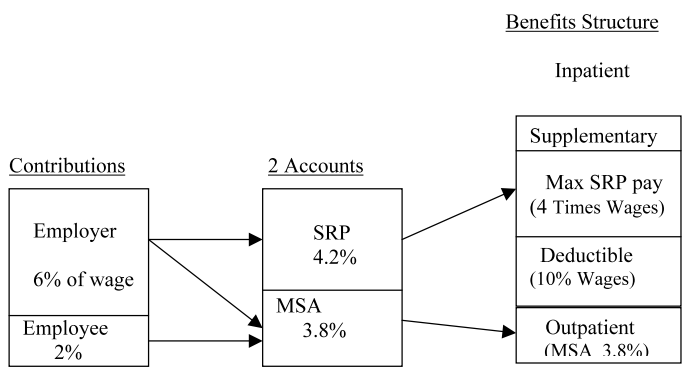

Fig. 1. Funding and benefit structure of the social insurance program.

Unspent funds at the end of a person's life become a part of his estate. When the MSA exhausted, enrollees have to pay outpatient expenses out-of-pocket. When an enrollee incurred inpatient hospital expenses, he has to pay first a deductible that equal 10% of his annual wage. Expenses exceeding this deductible are paid by the SRP, but the patient paying a coinsurance, the rate of which will be decided by the local governments. The SRP limits its payment for each enrollee to four times the average wage of the workers in that city. Expenses exceeding this ceiling can be covered by supplementary insurance schemes, or must be paid by the patient out-of-pocket. The government provides supplementary insurance coverage for government employees. Other employers may purchase supplementary insurance for their employees. The premium contributions by the employer are tax exempt up to 4% of their total wage bill. The employees can also purchase private supplementary insurance.

To help control the costs of the social insurance program, Essential Drugs Lists and Essential Services Lists have also been developed. These lists specify which drugs and services are covered (or not covered) by the program. The most restrictive of these lists are established by the central government; local governments can expand or reduce the items on the lists by up to 5%.

4.3. Management of social insurance

Each local government (city and above) establishes a social insurance bureau (SIB). SIBs are responsible for collecting premium (at the local government's discretion, this task may be assigned to tax collection agencies), contracting, and payment for services. SIBs, working with health authorities, accredit and contract with a set of healthcare providers, including outpatient clinics, pharmacies, and hospitals. Enrollees must go to one of these contracted providers if the expenses are to be covered by the insurance. The central government does not specify the exact payment method to be used by the SIBs to pay health care providers. However, given the pros and cons of each of the three major payment methods (fee-for-service, per diem, and capitation), local SIBs are encouraged to experiment with different payment methods to control costs while maintaining quality. The central government requires that, as a minimum, the risks are to be pooled at the city level and the local governments are responsible for making up any deficits.

4.4. The role of private insurance

As is indicated by Table 1, the percentage of the population covered by the private insurance is on the rise. In 1996, total premium income from selling private medical insurance policies were 1.3 billion yuan. In 1999, total premium income reached 4 billion yuan, increasing 40% per annum since 1996 [15]. However, compared with the need and demand in China's insurance market, the role of private insurance sector is still very limited. Currently, there are 11 life insurance companies in China that offer medical insurance products. These products include indemnity as well as workers compensation. But most of the private insurance

Table 1
Health insurance coverage in China

Insurance Schemes and covered population	1993	1998
Urban populations[a]		
GIS (%)	18.22	16.01
LIS (%)	35.26	22.91
Private insurance (%)	0.25	3.17
Rural populations[a]		
GIS (%)	1.56	1.16
LIS (%)	1.13	0.51
CMS (%)	9.81	6.50
Private insurance (%)	0.33	1.41

Source: National Health Service Survey of 1993 and 1998. MOH, China.

[a] In the National Health Service Surveys of 1993 and 1998, 'urban populations' are defined as those people residing in the 'cities', an administrative unit in China often defining a metropolitan area, and 'rural populations' are defined as those people residing in the 'counties', an administrative unit often defining a rural sector.

policies are designed to cover specific diseases such as cancer and congestive heart failure, which is small probability event but often entail catastrophic medical expenses. There is still a sizeable gap in the insurance market left to be filled.

Even when the social insurance scheme is fully established in China, private insurance has an important role to play in several areas. First, providing supplementary insurance for the enrollees of the social insurance schemes. The current social insurance scheme only provides a 'basic' benefit package with a ceiling capped at four times of the average wage. Government encourages employers and employees to purchase supplementary insurance to help cover medical expenses exceeding the ceiling of the basic social insurance schemes. Supplementary insurance benefits for government employees are to be funded by the government budget. Right now there is no clear policy as to who should be the dominant player of the supplementary insurance market. Four different parties are offering supplementary insurance policies to groups and individuals: enterprises (self-insurance schemes), social insurance bureaus, and commercial insurance companies. Second, commercial insurance companies can offer to cover services, which are not covered by the social insurance schemes. These may include deductibles, co-payment as well as services or drugs that are not on the official list of essential services and drugs. Third, providing comprehensive insurance to the currently uninsured. About 44% of the urban population, including self-employed and rural industrial workers, will likely to be left out by the social insurance schemes [16,17]. Furthermore, most of the rural population (about 70% of the total population) also need insurance coverage. It is an important policy question of how the social insurance and private insurance sector interact with and compliment each other to serve different insurance needs of different people.

5. Discussion

5.1. An international comparison

China's reform experiences share some common features found in other transitional economies such as Former Soviet Union (FSU), Vietnam, Central and Eastern European Countries (CEE) [18,19]. A fundamental issue in the reforms is how to redefine the role of the government and market in economic and social sectors under a market economy. Influenced by their policies to reform the economic systems, all the transitional economies reduced the government role in healthcare financing. The share of total health spending by the private sector has increased. At the same time, these countries put an increasing emphasis on the payroll tax-based social insurance system, moving away from a predominantly general revenue-based financing system under the old command economy. The increasing role of social insurance in the transitional economies resulted from a common belief that, compared with a system financed by general revenues, which are subject to political bargaining and negotiations, a social insurance system would be a more stable and efficient financing system. However, social insurance systems have been designed and operated differently in different countries. Several features distinguish China's reform experiences from those of other transitional economies.

To begin with, China is the largest country in the world. Social insurance schemes are introduced only recently in China, and they only cover part of the urban populations. While majority of the rural populations in China remain uninsured, social insurance schemes vary in terms of levels of funding and benefits across different urban areas. The overall funding and benefit patterns of China's social insurance system are also unique. There are questions about the 'insurance' aspects of China's social insurance system. Unlike in other FSU and CEE countries with higher tax rates and thus more comprehensive benefit packages, China's tax rate for social health insurance is as low as 8% of the payroll, and there is a ceiling on benefit levels. Moreover, 3.8% (out of the total 8%) of the payroll taxes are put into the individual MSAs, and thereby with no risk-pooling for this money. Because of the common as well as unique features of the Chinese experiences, in comparison to other transitional economies, a more detailed examination of the major challenges underlying China's social insurance reform is helpful, not only for developing better future reform policies in China, but also for enriching the international debate on how to best structure a country's health financing systems.

5.2. China's reforms: major challenges and policy implications

In essence, the urban health insurance system reforms in China intended to establish a social insurance scheme, which provides affordable health care benefits to the urban workers by pooling the risks at the city level. This is a major step forward. The old system of GIS and LIS does not cover urban workers in private sector. It does not pool risk across work units. By contrast, the new system expands the coverage to all the urban workers in joint ventures and private enterprises, the

number of which has been increasing. Furthermore, the coverage under the new system will be more stable than that under the old system, because benefits provided by the GIS and LIS are tied to the financial situations of the employers and there is lack of measures to control costs of the comprehensive benefit packages. A study estimated that in 1996 the GIS fund can only cover 67% of the medical expenses that should be reimbursed, and LIS schemes have also accumulated sizable unpaid medical bills. For the deficit-running enterprises, the reimbursement rate of the LIS schemes is as low as 50% [15]. By contrast, the new system with a basic benefit package, in addition to guaranteeing first tier coverage of the MSA, has a larger risk pool across work units for covering hospital expenses, thus a more stable financing mechanism.

Despite these advantages, implementation of China's health insurance reform program has been slow. Although the State Council has repeatedly called upon local governments to speed up the insurance reform, no significant progress has been made. The central government planned to establish the new system by the end of 1999. But only 28 provinces, autonomous regions, and municipalities developed their work plans in 1999. At the end of 1999, the total number of enrollees in the new system was 5.94 million. The progress in health insurance reform falls far behind the reforms in pension and unemployment insurance [16,17]. It is questionable that the coverage would reach the 80-million mark set by the State Council by the end of 2001 [20]. The process is faced with several major challenges, including risk transfer from work units to municipal government, diverse need and demand for health insurance benefits, incongruent roles of the central and regional governments, and administrative capacity, efficiency and accountability. These challenges may reflect practical difficulties in policy implementation as well as some deficiencies in the original program design. In the following section we analyze some of these problems and discuss their policy implications.

5.3. Transfer of financial risks from work units to the cities

The essence of the insurance reform in China is to replace the work unit based schemes with municipal schemes. The major impediments in its implementation are both financial and administrative. The budgetary units are cities and counties. Local governments are reluctant to implement the program for fear of running deficits. Any deficits of the insurance funds have to be absorbed by the local governments, which may represent a drain on their budget. These concerns of the gap between available resources and obligations under the new system are not unwarranted. The first problem encountered is enrollment and premium collection. The difficulties come from two major sources: lack of administrative capacity and adverse selection. China does not have a uniform method for collecting social health insurance contributions. Some regions use the tax collection system. Others rely on the recently established SIBs to collect contributions. These agencies do not have the legal authority to force the participation, because China does not yet have a social insurance law. Therefore, an immediate policy recommendation would be to develop and pass such a law, so that the schemes can become really compulsory.

Without this law success in premium collection is dependent, to large extent, on the employers' willingness and ability to pay. The SOEs with a large number of retired workers are willing to participate in the program. But many profitable joint ventures and private enterprises with a younger work force are less willing to make the contributions. Due to limitations of the decentralized fiscal system, many social insurance schemes are likely to have a risk pool based at the county level, which is a rather small base for pooling risks. Without adequate safety measures such as transfer payment and reinsurance mechanisms, localities are left fending for themselves in case of running deficits. Establishing some compensatory transfers within a decentralized system would seem to be a sensible approach. For example, funds with a particularly heavy load of retired members can receive compensatory contributions from a national reserve fund. The objective of this system is to equalize across the various funds the financial burden imposed by the aged on the contributing working members.

The new system relies heavily on demand-constraining measures to control costs, through MSAs and deductibles and copayment. There is no strong empirical evidence to support the effectiveness of the demand-constraining measures to contain total costs. More specifically, depending on how the use of MSA is structured, the system will have different incentives. If accumulations in MSAs can be used to meet deductibles and copayment, and if fair interest is paid on MSA balances to offset inflation and to provide a fair return, an incentive will be created for the consumers to save and to refrain from demanding health care of relatively low priority. On the other hand, if interest is not paid to the MSA balances, and if deductibles and copayment always have to be paid out-of-pocket, in addition to exhausting the funds on MSA, people will have an incentive to use up balances prematurely.

International experiences have shown that supply-constraining measures, if constructed properly, are more effective in controlling costs and are preferable for both economic and social reasons to demand-side cost sharing [21–23]. China's own experiences from the experimental cities also indicated that payment reforms were a key to cost containment [24]. However, current system does not provide any guidance as to what directions the payment reforms in China should go. Taking on cost-control as one of the top priorities, many localities began to try different ways to shift part of the risks to the providers. Two major measures have been used: controlling regional expenditure growth and packaged payment. In Shanghai, increase of hospital expenditures is capped at 11% [25]. In Dalian, hospitals are paid a fixed amount (3000 yuan) for each episode of hospitalization. Other localities are likely to follow suit, because under the later arrangement insurers do not have to bear financial risks.

The central government does not have a plan, nor does it consider it as one of the top priorities, to conduct systematic experiments on and evaluation of different payment methods. Meanwhile, many localities do not have the administrative capacity and technical know-how to ascertain and adopt appropriate payment methods. Having emphasized the importance of payment reforms, it should be pointed out that the success in cost containment will not only depend on payment

reforms, but also on other related reforms in the health sector such as pricing reforms and organizational reforms. China's strategy to contain medical cost inflation is to institute sector wide reforms, rather than relies on health insurance reform. Nonetheless, payment reforms by social insurers can certainly exert significant influence, as it takes on an increasing importance in the country's health care financing.

5.4. Diverse need and demand for health insurance

China's health insurance reform is constrained by a fundamental fact: China is a large low-income country with significant regional socioeconomic variations. This implies that only a 'basic', rather than a comprehensive, benefit package can be afforded by the new system. Diverse need and demand for health insurance must be taken into considerations. At the core of the design issues is the question of what national standard 'basic' benefit package should be imposed to reflect national priorities, and what kind of flexibility should be given to the localities to accommodate their differences in need, demand, and finance.

5.4.1. Benefit reduction

Compared with the old system of GIS and LIS, the benefit structure under the new system has two major gaps in coverage. First, the dependents of the urban workers, who used to receive partial coverage, are now not covered. Second, the new system has a ceiling on the insured amount of the individual medical expenditures (equivalent to four times the average wage in the region). Imposition of this ceiling is due to budget constraints as well as the political emphasis of 'wide coverage', namely benefiting most of the enrollees. It is estimated that the premium contribution based on the 8% of the current wage bill can only cover about 70% of the total outlay under the old systems of GIS and LIS [15]. This means that the new system may represent a benefit reduction for some people, one of the major reasons for the public dissatisfaction with the new system.

Economic development levels vary a great deal from region to region in China. It is very difficult to establish a uniform system throughout the country. This is especially true in regard to the capabilities of and willingness for premium contributions. The national policy set the tax rate at 8% of the wage bill. Many affluent regions found the rate inadequate to generate sufficient fund to meet the demand. Some coastal cities such as Shanghai and Suzhou used to spend about 17% of the total wage bill on health care under the old GIS and LIS schemes. Now only 8% of the wage bill can be collected for the social insurance program, and the local governments have to go through a cumbersome review process to get a waiver, if they want to raise the tax rate. China might want to give more flexibility on setting up the premium rate might to localities according to their need and affordability. While a minimum rate (e.g. 8% of the wage bill) could be specified, provinces or cities should be given an option to raise the tax rate so that they could provide a benefit package, which would not be inferior to that under the old system. To prevent excessive tax expenditures on health insurance subsidies, the central govern-

ment may specify a maximum amount of tax-exempted premium contributions (e.g. 12% of the payroll by the employer).

5.4.2. Coverage of catastrophic expenses

As is the case with any health system reform, China's health insurance reform will have an impact on two major goals of the system: equity and reducing poverty, and improving people's health status. To align the benefit packages with these two goals, we can use two different principles in designing the 'basic' benefit packages: the cost-effectiveness principle and the insurance principle. If our major goal is to achieve maximum aggregate health status with available resources, it is sensible to rely on the cost-effectiveness principle. On the other hand, the equity and poverty alleviation goal has two main implications for reform strategies. It places the emphasis on who benefits from the insurance program, arguing that it should differentially be the poor and financially vulnerable, not necessarily those who suffer from diseases for which the most cost-effective treatments are available. Following this principle, we would also want to provide coverage for the catastrophic medical expenses.

Because of the cap on the expenses covered by the social fund, the scheme will leave most catastrophic illnesses uncovered. This structure does not put emphasis on achieving the equity and poverty alleviation goal, which underlies reforms of other components of the social security system (e.g. pension, unemployment insurance, etc.). Under the new social insurance system, employees, in principle, are expected to take out commercial insurance to cover catastrophic illnesses, but it will be voluntary not mandatory. Naturally, this will introduce a serious potential problem of adverse selection. Whilst younger employees facing a small risk will have little or no incentive to purchase commercial insurance, older workers facing a higher risk will have the incentive to do so. As a third-party payer, commercial insurance companies often lack effective means to control medical costs through controlling provider behavior. That is one of the major reasons for lack of significant participation and market share of commercial insurance companies in China's supplementary as well as comprehensive health insurance market today. Two major approaches to provide supplementary insurance emerged in China. In cities such as Zhenjiang and Suzhou, social insurance agencies directly provide supplementary insurance coverage by charging a premium, additional to the contributions made to the basic insurance schemes. Xiamen City represents another approach—social insurance agencies use the additional premium to purchase supplementary policies from selected commercial insurance companies. But it is unclear at this point, which approach is more efficient. It appears, however, for supplementary insurance schemes to play a viable role in China, either purchasing such coverage has to be made mandatory, or supplementary insurance schemes to cover catastrophic illnesses need to be managed and subsidized by social insurance schemes.

The current policy of leaving out catastrophic coverage from the social insurance system seems to be at odds with perceived priorities by many municipal governments. In the fact, all the health insurance reforms initiated by the cities themselves

such as Shenzhen, Shanghai and Beijing began by introducing hospital insurance schemes and catastrophic insurance schemes. As of 1999, 14.7 million people were enrolled in the social insurance schemes, organized by various local governments to cover catastrophic medical spending [16,17]. The membership is far greater than that for the basic social insurance schemes as of today. Therefore, it is suggested that the central government reexamine the 'basic' benefit design, so that the insurance function of the new system could be strengthened. Focus of the coverage on 'small expenses' should be shifted to that on 'large and catastrophic expenses'. This involves substantially raising, if not eliminating altogether, the ceiling put on the reimbursement from the social fund.

Should covering catastrophic expenses become an important part of the standardized 'basic' benefit package, setting up MSAs does not seem to be necessary or urgent. The individual MSAs are supposed to cover 'small' expenses, which are yet to be defined precisely. The coverage depends crucially on the accumulated balances in the personal account. The implication is that whereas younger employees, with low incidence of illnesses, would pay little or nothing from their own pockets, older employees, especially those with chronic conditions, would be covering 'small' expenses themselves. Moreover, if MSAs are used as a cost control mechanism, its effectiveness is unproven. In addition, as pointed out above, the operation of individual medical accounts raises massive operational problems. Therefore, setting up MSAs could be made optional, rather than compulsory, for the cities.

5.5. Institutional issues

Administration of the new health insurance system in China involves a combination of centralization and decentralization. As can be seen from Table 2, some important decisions are in the hands of the central government, while others fall in the jurisdiction of the provincial governments. The national government sets up the

Table 2
Responsibilities of the central and provincial governments in administering the social health insurance system

Decision space	Central government	Provincial government
Membership	Mandate: urban workers	Discretion: self-employed and rural industry workers
Premium rate	Set at 8% of the wage bill	Discretion discouraged
Benefit design	MSA and SRP; ceiling; essential drug list	Discretion: co-payment rate; how to set up supl. Ins
Payment	No specification	Discretion: fee-for-service or other payment methods
Management	(a) Administrative costs should not be financed from premium contributions	(a) Budgetary finance
	(b) Suggest risk pool	(b) Discretion: county/district or city risk pool
	(c) No cover for SRP deficits	(c) Budgetary finance

overall policy direction as well as lays out some specific design requirements, including premium rate, level of risk pool, and benefit structure. However, the responsibilities of operation and management are totally shifted to the local governments, including financing of the insurance fund deficits. This indicates certain mismatch between their rights, responsibilities, and capabilities.

As suggested elsewhere in this paper, the roles of the central and regional governments in the new health insurance system need to be reexamined. In addition to some flexibility due to the localities, Central government needs to take more financial responsibilities to help establish a more stable and equitable health insurance system. In many of the CEE and FSU countries, where a social insurance system was introduced, a strong government role in health care financing and regulation has been emphasized [18]. For example, governments in these countries provide premium contributions to the insurance funds on behalf of those people who cannot afford the premium contributions.

Emphasizing certain government roles and functions, however, does not mean that governments should be given a free run of all the social insurance operations. Creation of the new organizational form, SIBs, is also associated with creation of new set of bureaucratic politics. As is shown in other countries, these parastatal agencies may or may not act in the best interests of the people [18]. Therefore, the issue of accountability is an important one for China, where a democratic political system has not yet been formed. In all fairness, China's new social insurance system does provide some consumer choice—consumer can choose among the contracted providers in the community, he can buy drugs either at the hospitals or at the independent pharmacies. However, consumers do not have a choice of health plans, and it is not clear whether the benefits are portable. Under the new system health care providers will be held accountable for their performance, because SIBs can use several leverages such as contracting and payment. But are the social insurance organizations also held accountable? If so, by whom, and how? These questions have not yet been adequately addressed. Other than stimulating establishment of auditing procedures, very little thought has been given by the governments to the design of checking and counter-balancing mechanisms. There is lack of transparency of the system operations. With the increasing power of the SIBs, this issue may become even more critical.

To build into the system an adequate accountability mechanism is an important, yet more difficult task. In other social security schemes such as pension for the retired workers, people have direct interaction with the system, and thus can intimately be affected by and affect the performance of the system. Members of the health insurance schemes, by contrast, have much more direct contact with the medical system than with the insurance system, because payment and settlement are usually between the insurer and provider. Accountability of the health insurance system can be enhanced, if major stakeholders (e.g. consumer representatives, health care providers, and employers) can more closely be involved in major policy decisions such as designing 'basic' benefit packages, modifying essential drug list, etc. In this regard, China and other transitional economies have a lot to learn from each other in carrying the reforms forward.

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