More details/abstract: The aim of this article is to contribute to the understanding of the institutional arrangements within which China's rural health facilities are embedded and of the contribution of policy to the creation of these arrangements. Information collected through field observations and in-depth interviews with the managers, staff and patients of a township health centre indicates that with the gradual evolution of markets, encouraged by state policies, health care in rural China took on more of the characteristics of a commodity. In order to adapt to this change, the health centre and its employees are adjusting their behavioural norms and reconstructing an institutional network within which daily activities of simultaneously fulfilling public health responsibilities and pursuing economic gain are legitimized. This article focuses on the interwoven relationship between politics and markets at the micro level and examines the negotiations between stakeholders in constructing new institutional arrangements. It also describes how health sector managers are creating regulations to influence the performance of their facility. The article argues that while government policies play a crucial role in shaping the direction of development, institutional arrangements strongly influence the attempts by rural health organizations to implement them. It concludes that it is critical to take institutional factors into account in analyzing China's rural health-care reforms.

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Balancing Efficiency and Legitimacy:

Institutional changes and rural health organization in China

Xiaomei Pei and Gerry Bloom

Abstract

The aim of this paper is to contribute to understanding of the institutional arrangements within which China's rural health facilities are embedded and of the contribution of policy to the creation of these arrangements. Information collected through field observations and in-depth interviews with the managers, staff, and patients of a township health center indicates that with the gradual evolution of markets, encouraged by state policies, health care in rural China took on more of the characteristics of a commodity. In order to adapt to this change, the health center and its employees are adjusting their behavioral norms and reconstructing an institutional network within which daily activities of simultaneously fulfilling public health responsibilities and pursuing economic gain are legitimized. This paper focuses on the interwoven relationship between politics and markets at the micro level and examines the negotiations between stakeholders in constructing new institutional arrangements. It also describes how health sector managers are creating regulations to influence the performance of their facility. The paper argues that while government policies play a crucial role in shaping the direction of development, institutional arrangements strongly influence the attempts by rural health organizations to implement them. It concludes that it is critical to take institutional factors into account in analysing China's rural health care reforms.

Keywords

rural health reform, NCMS, service provision, institutional change, health market

Introduction

China's rural health service delivery system has undergone tremendous changes in the

last three decades. Before 1980, rural health services were delivered through a relatively well-structured system in which the public sector played a predominant role in the organization, provision and finance of health care. The system was constructed in the 1950s based on a philosophy of co-operation between actors, including various levels of government, health providers, and the rural residents and was supported by a community-based health insurance program, the Cooperative Medical Scheme (CMS). Although constrained by both material and human resources, it provided basic health services to two-thirds of the Chinese population (Chan et al. 2008).

China's rural health services came under pressure during the 1980s and 1990s with the collapse of most CMS schemes and the lag in government health budgets behind the rapid rises in health worker earnings and in the price of drugs. Duckett (2011) characterizes this process as a 'retreat' by the Chinese state from the health sector. A number of analysts characterize this process as the adaptation of the health sector to the nation's transformation from a centrally planned to a market economy (Gong et al. 2007; Bloom et al. 2008). Unlike the efficiency achieved in some economic sectors, the spread of markets in the health sector has resulted in services that are both inefficient and unequal (Wagstaff et al. 2009*a*). At the turn of the century, about one third of rural households, who reported falling under the poverty line, attributed it to serious illness of a family member (MOH, 2004).

Over a number of years the increase in health care costs and the lack of an effective social insurance system led to increasing pressure on policy makers to act (Zhang et al 2009). In 2003 the state launched a new health insurance program, the New Cooperative Medical Scheme (NCMS), to protect rural residents against the impoverishing impact of major illness (WHO, 2004). The NCMS was designed as a voluntary insurance program funded by contributions by rural residents and matching funds from both central and local governments. By the end of 2008, the program covered more than 95% of the rural population and government funding had increased much more than household contributions (MOH, 2009).

Studies of the impact of the NCMS have generated mixed findings. Several

studies have demonstrated increased spending on out-patient and in-patient services，but they have not clarified the degree to which the increase could be explained by rises in prices of medical services and provision of inefficient and unnecessary services (Zhang et al. 2010). Others have found evidence of over-prescription of pharmaceuticals and over use of diagnostic tests (Wagstaff et al, 2009*a*; Lei and Lin, 2009; Yi et al, 2009; Zhang et al, 2010). These findings have led to a concern about the degree to which health facilities act in the interests of rural people, despite being publicly owned (Yip and Hsiao 2008). Initially the government focused largely on expanding coverage of NCMS and preventing misappropriation of funds, but as the level of government funding has risen, it has paid increasing attention to the quality and cost-effectiveness of services (Bloom 2011). This is generating an increasing interest in the factors that influence the performance of health facilities and in possible strategies for influencing them to improve.

There has been a gradual accumulation of knowledge on the marketization of China's rural health delivery and its interaction with its political, social and economic context, but relatively little is known about how rural health organizations are adapting to the spread of markets. The authors of this paper believe that it is time to investigate the changing patterns of incentives and changing types of interactions between actors in a period of rapid institutional change. The aim is to understand the institutional barriers to effective services to the rural Chinese population. Since the phenomenon of low performance of rural health provision is worldwide, our study responds to the call for knowledge on ways to organize, pay for, and oversee health services in resource-poor settings (Travis et al. 2004).

In the next section we present an analytical framework for understanding the impact of institutional constraints on rural health organizations and the strategies these organizations adopt in response. We then introduce the methods used for the case study. The following sections introduce NCMS and its effect on the study health centre, and discuss how the health centre has coped with the rapidly changing context within which it has to function. The paper concludes with a discussion of the implications of the major findings.

Institutional Constraints, Organizational Choices and Market Transition

Studies of the response of health organizations in rural China to external pressures have generated interesting findings about how they adjust the size and composition of their workforce, enact new internal management systems and incentives, bargain for latitude to generate business revenue and use it to buy equipment and pay performance-related bonuses and expand activities into areas with commercial potential (Wagstaff et al. 2009*a*). Some studies have also identified a tendency of rural health organizations to perform outreach work in the community to increase public awareness of their services and build their reputation (Fang and Bloom 2008). However, there is little systematic information on the influence of social contexts on this organizational behavior.

Scholars of the new institutionalism in organizational sociology (Meyer and Rowen, 1977; Scott 1995; Scott et al. 2000, Pfeffer and Salancik 2003) suggest that organizational behavior is facilitated and constrained by two types of external forces, which they conceptualize as material and institutional environments. Factors such as demand, supply, technology, and industrial structure form the material environment for the efficiency of an organization, while values, the relationships between actors and forms of governance create the institutional environment to guide and legitimize organizational behavior. Organizations need to conform to rules and rituals in order to be socially acceptable. Their behavior is influenced by both endogenous and exogenous factors (Neessen, 2009).

All organizations are constrained by the two types of environment in pursuing efficiency and legitimacy and coping with constraints (Hrebiniak and Joyce 1985; Pettigrew 1987; Boyne 1996). Organizations are the principle players in institutional change processes in terms of both the way they are influenced by institutions and how they function as collective actors possessing resources, rights, distinctive capabilities and limitations (Scott et al. 2000). There is evidence that leaders of organizations can make genuine choices and have substantial discretion in their response to external

constraints (Andrews et al. 2005). However, they face difficulties stemming from inaccurate perceptions of external demands (Pfeffer and Salancik 2003).

China's transition from a centrally planned to a market economy over the last three decades provides a context for understanding the behavior of organizations. Some initial observations on changes to state-owned enterprises led to the view that the liberalization of the economic market would, on its own, enhance efficiency (Nee, 1989). Later observations found that political authority, bureaucratic bargaining, and governmental intervention in risk and benefit sharing played important roles in the development of markets (Bian and Logan 1996; Parish and Michelson 1996; Gerber and Hout 1998; Zhou 2000; Bian and Zhang 2002). A conceptual model of co-evolution of economic and political markets (Zhou 2000) provides considerable room for understanding organizational choices. In the light of the intertwined influence of politics and markets on the social institutions in transition, a competitive relationship between organizational efficiency and legitimacy has been noticed (Orrù et al. 1991).

There have been more academic studies of institutional arrangements in economic sectors, rather than public services in China. There have been very few studies of institutional influences on the behavior of health provider organizations. However, there is clearly a need for a better understanding of the poor performance of health organizations in meeting needs in poor rural areas.

Methodology

Health care researchers have noticed that much of the transformation of medical services is reflected in the nature of the medical organizations providing those services. As such, it is important to examine how institutions respond to forces operating both in the immediate area and at broader societal level (Scott et al. 2000). Our research draws on information collected from two rounds of field work in 2006 and 2008 at a township health center (THC) located in a relatively poor country in Central China. We collected first hand data through observation and in-depth interviews with the health center's managers and staff, the in- and outpatients, local

government officials, and local residents. We also collected documents on various aspects of the center's operations, such as revenues and expenditures, the rules and regulations, personnel, and the distribution of resources.

The researchers lived in the health center for a week for each of the two field visits. We collected data on the behavior of relevant actors during service delivery and the responses of users and observed the interactions between local government officials and the center's administrators. We also conducted unstructured in-depth interviews with the center's managers, staff, service users, and staff of the local NCMS program office to generate information on the institutional factors that affect the behavior of the providers.[1] The interviews were recorded and notes were taken. The interviewers also wrote journals and operational records, and took photos after the interview. The following table describes the number and type of interview records and operational records secured from the field work.

Table 1. Description of the information collected on the case

Type of Job	***No. of interviews***	***Type of documents***	***No. of Records***
Manager	5	Human resource	9
Physician	24	management	3
Nurse	11	NCMS	40
Pharmacist	3	Reports	3
Technician/Clerk	4	regulation	12
Patient	2		
Total	*49*	*Total*	*67*

We are aware of the limitations of the method used. None the less, we believe that the qualitative approach provides useful in-depth information and reveals the interaction and dynamism of the NCMS as it is rolled out (You and Kobayashi, 2009).

Features of NCMS and Its Impact on the Study THC

The implementation of the NCMS

The NCMS is a health insurance program, whose aim is to provide medical insurance

[1] The interviewees were informed of the purpose of the research and oral consent for using the data for academic publications was received from each interviewee. We promised the interviewees anonymity in any publications based on the information from the interviews.

for the entire rural population and protect households against the impoverishing impact of major illness by sharing financial risk between households and government. It is funded by a combination of voluntary household contributions and allocations by different levels of government. In the case of poor provinces, the central government provides a fiscal transfer of a defined amount of money per beneficiary, on condition that local governments provide matching funds. In order to reduce the risk of adverse selection, the NCMS requires full household participation, with either all or none of the members in a family enrolled. The schemes are administered by county governments, which are allowed to design and implement their own programs according to their specific needs with respect to deductibles, copayments, premiums, and coverage (State Council 2002; MOH, MOF, MOA 2003).

The study county was one of a group selected to pilot the NCMS. It was a national "poverty" county and had relied on state fiscal support for decades. By the time of our first visit in December 2006, the county had been piloting NCMS for three years and enrollment had reached 60% of its population. Following national policy guidelines, the county government signed contracts with one health center in each township and with the two county hospitals (one practicing modern medicine and the other practicing Chinese medicine) to implement the NCMS. By the time of our second field visit in June 2008, there had been increases in coverage, the percentage of government funding and the amount of benefit received by enrollees.

Table 2. Implementation of NCMS in the study county

	2006	2008
Coverage	75%	90%
Government funding for each beneficiary	20 *yuan*[2]	40 *yuan*
Inpatient care reimbursement rate at THC	60%	80%
Inpatient care reimbursement rate at County Hospital	50%	60%

The Township Health Center as A Rural Health Care Provider

The study township health center (THC) was meant to provide services to a township

[2] *Yuan* is a unit of RMB, the Chinese currency. During the time when the study was conducted, the rate of exchange was about seven *yuan* to one US dollar.

with a population of 67,963 in an area of 226 square kilometers. As the second of the three tiers of the rural health system, it served as a link between village clinics and county-level hospitals.[3] In 2006 it was a two-storey building on a compound of 7,800 square meters, with 20 beds and 75 employees, of whom 33 were qualified health workers.

The THC had been publicly owned since 1955. Prior to the transition from collective agricultural production, its staff were paid by the collective and the operations expenses that were partially financed by the CMS. It was staffed by health workers with limited medical training, it provided basic medical care as well as medical prevention (*yiliao yufang*), disease control (*weisheng fangyi*), maternity and child care (*fuyou baojian*), and hygiene education (*weisheng xuanchuan jiaoyu*) (MOH 1960). The economic reform since the early 1980s changed the THC in many ways. The dismantling of CMS and the lag in local government health budgets behind the increase in costs meant that it had to generate an increasing proportion of its budget from patients, reaching more than 90 percent at the time of the study. The local government allowed the THC to generate revenue by charging patients and selling drugs. The government controlled prices, keeping the fee for certain high priority services low, but it permitted health facilities to earn a fixed mark-up on the price of pharmaceuticals and provide new diagnostic tests at a higher price.

The THC was expected to take responsibility for health prevention and promotion and provide a secondary level of medical care. The first mission was carried out by a specific section with two health workers within the facility, which provided immunizations, monitored prevalence of communicative diseases, trained and guided the village health workers in preventive practice and organized annual medical check-ups for people in food handling businesses.

The THC allocated more resources to the provision of medical services than to public health and 21 out of 33 health workers were involved in the provision of

[3] See Chan, C. K., Ngok, and Phillip, D. (2008) *Social Policy in China: Development and wellbeing*, Chapter Seven, pp.115-146, UK: The Policy Press, and Wagstaff, A., Lindelow, M., Wang, S., and Zhang, S. (2009), *Reforming China's Rural Health System. Washington DC: The world Bank,* for a more comprehensive introduction of the three-tiered health system in China.

in-patient and outpatient medical care. There were pharmaceutical departments for both Western and Traditional Chinese Medicine.

The Impact of the NCMS on the THC

The introduction of NCMS affected the organization of the THC in three ways. First, it became an active participant in the implementation and regulation of NCMS. Second, the NCMS provided a legitimate policy framework within which the THC could generate revenues through market mechanisms. It helped farmers to pay for services and contributed to an increase in demand. Third, the emphasis of the NCMS on reimbursing serious illness, stimulated an increased demand for more sophisticated services and encouraged the THC to provide more of these services. The NCMS also imposed some institutional constraints on the daily practice of the center.

1. Multiple and Ambiguous Roles of the THC

As a NCMS-contracted health facility, the THC was assigned responsibility for administering the program. It set up an office with two staff members assigned to collect household contributions, verify the implementation of regulations on prices and procedures, review reimbursement requests and arrange payment of reimbursements.

The center was also expected to deliver extra services assigned by the NCMS. For example, it was required to provide all beneficiaries with an annual medical check-up. According to a report issued by the NCMS administration office, between April and July 2006, the center provided medical check-ups for 67% of all beneficiaries. The provision of annual check-ups was part of an effort by the county government to convince farmers to enroll in NCMS. Local government leaders had strong incentives to achieve high levels of coverage in a high priority government program. The head of THC reported that it was difficult for his facility to simultaneously carry out its day-to-day operations and provide this special service.

2. Organizational shift toward partial government-funded but profit-making medical enterprise

The THC was struggling for financial survival before the launch of NCMS. It

received only 10% of its budget from the local government. This allocation only paid the pensions of 30 retired personnel and the basic salaries of the 37 permanent government employees, hired before 1991. The THC funded all other expenditure, including basic salaries for the 38 people hired after 1991 and bonuses for all employees, out of profits from selling services and drugs.

The center also received government investment grants. At the time of our study, the center constructed a new building. The initial funds came from a state grant for improving the "medical environment (*yiliao tiaojian*)" of rural health facilities. The grant did not cover the entire cost of constructing a new building, but it helped the center secure a bank loan. The repayment of the loan had to be financed out of profits from selling health-related goods and services, thereby increasing the pressure to generate revenue.

3. A Workforce of Low Medical Skills

The statutory responsibility of THCs is to provide preventive services and basic medical care. The study THC achieved this with a work force made up largely of semi-professional health workers. We found a tendency by the THC to provide an increasing number of relatively sophisticated services. This trend was already underway by the late 1990s, but the introduction of NCMS, which reimbursed sophisticated inpatient services at a higher rate, gave it additional impetus.

The center's effort to expand its scope of services was limited by the low level of skills of its employees, many of whom had only two or three years of formal medical training. Table 3 presents data on the professional status of doctors involved in medical care and the change in types of service delivered.

Table 4 Qualification of the health workers and type of service provided

	2006	**2008**
Educational level		
3 and more year college graduate	18	18
2 year college graduate	15	15
Professional level		
Certified Clinicians	24	24
Certified Clinical Assistants	9	9
Type of services delivered		

Acute and surgical	70%	90%
Preventive	30%	10%

Most of the THC doctors had been engaged in clinical practice for at least 20 years. The center's administration encouraged continuing education among the health workers. Each year, opportunities for up-grade training in the county hospital were created through coordination between the administrators of the two facilities. One or two health workers from the center were given the opportunity to work in the county hospital as a trainee for about six month. Almost all the doctors in the center had experienced such kind of training.

The manager, a doctor himself, was aware of the limited medical skills of his staff. He had made substantial efforts to improve their practice. Basic clinical guidelines were posted on the wall of each office to remind staff on how to undertake specific procedures. He viewed the lack of professionals as the barrier to further development of the center.

Adapting to Policy Induced Changes

The THC made great efforts to adapt to the changing policy environment. These efforts included bargaining with the local government in shaping the implementation and regulation of the local NCMS, shifting the organizational goals toward economic gains, and expanding service boundaries through buying new equipment and borrowing professionals from the county hospital.

Negotiations for political resources

The THC was expected to assume multiple roles. Besides being a health service provider, the local government expected it to play a role in implementing and managing the NCMS. Its director regarded his facility as a partner of the local government and a stakeholder in local governance. With one of the center's managers serving as a delegate of the county's People's Congress, the local legislative body (*xian renda daibiao*), the THC had been actively involved in decision-making about

local policy and resource allocation.

As mentioned in the previous section, the center was asked to provide medical check-ups to NCMS beneficiaries to encourage more people to enroll. The THC invited the local media to contribute by publicizing its work and the NCMS. This enabled the THC to reinforce its partnership with the local government and prove its capacity to *disseminate information on NCMS benefits*. In return, the THC asked the local government to support its activities. Mutual understandings are often built through this kind of informal interaction, rather than through formal contracting.

The THC used the provision of medical check-ups as an opportunity to promote its image as a public service provider. It persuaded the township government to mobilize local civil servants and village leaders to collaborate with the outreach effort. This activity seems to have improved the image of the THC and the government. As one aged farmer put it, "*This is the first time in my life to have a medical check-up. The policy (of NCMS) is good"* (Interviewee no. 14). The farmers expressed gratitude to the government for the NCMS as a policy, and to the center for delivering benefits to them. The THC enhanced its reputation in this process of interaction with villagers.

Having a good reputation, in turn, enhanced the ability of the THC to bargain with the local government for more support. It lobbied for more resources and this may have contributed to the decision by the NCMS to reimburse a higher proportion of the cost of care at township level than in hospitals and county level and above.

Shift of Organizational Goals

We found that the operation of the THC was focused on the organizational goal of "*income generation*." At the beginning of each year, the manager drew up an annual plan which specified an expected amount of profit. This plan was translated into specific targets for individual health workers. Those who met their income targets received 100% of their regular income, while those who failed received less.

It would appear that before the introduction of NCMS demand for medical care was significantly limited by the low income of the farmers. The implementation of NCMS seems to have relieved this constraint, to some extent. Between 2005 and 2008,

the rate of increase in utilization of outpatient services was much slower than the increase in inpatient care. This may have reflected the higher rates of reimbursement by NCMS for hospital treatment.

Table 1. Increases in utilization of the services and in generation of profits

	2005	**2006**	**2007**	**2008**
Rate of increase in Outpatient visits (%)		22	14	9
Surgical procedures	27	41	49	53
Bed occupancy rate (%)	50	60	100	100
Income generated *(million yuan)*	1.2	1.8	2.0	2.8

Expansion of Service Boundaries

Despite the lack of qualified health workers, the THC substantially expanded the scope of services it provided. It used two strategies to achieve this. First, it invested in buildings and equipment. It used some of its profits to buy a hemacytometer analyzer, a B ultrasonic machine and so forth. By 2008, it had also built a new three story building to replace the old one. The new building had double the number of beds and a lot more equipment. These efforts to upgrade the physical conditions were viewed by the administrator as "*improving the level of services*" and "*more advanced services being provided to the farmers*". (Director, Interviewee no. 1)

Another way to provide a wider scope of medical services was to invite qualified physicians from the county hospital to undertake operations at the THC. This was made possible after new equipment and technology was introduced. The head of the THC was confident in the center's capacity to provide more surgical procedures, with the involvement of county doctors. "*We could deliver a lot of operations with the help of the physicians from the county hospital. Although the head of the county hospital*

would not like us to do this, I have ways to persuade him. For example, I would claim that I have an acute case that needs their experts to come to help" (Director, interviewee no.1).

Having county hospital doctors provide operations at the THC seemed to be in the interest of all parties. The THC health workers had a chance to learn from visiting doctors. "*From time to time we come across cases such as fibroids, which required treatment by laparoscope assisted vaginal myomectomy (LAVM). In such a case, we invite a doctor from the county hospital to come to the THC. While he conducts the operation, I provide assistance.*" (the gynecologic/gynecological clinician, interviewee no. 5） It also enabled patients to receive surgery without having to go to the county town. "*My wife received the LAVM at the township center. It was the doctor from the county hospital who did the operation. I made an agreed payment to the doctor. My wife was hospitalized at the center for 10 days. The total cost was a bit over 3,000 yuan. 1,800 yuan was reimbursed. The operation was done quite well and she was all recovered. Moreover, I am satisfied with the reimbursement*" (a patient's husband, Interviewee no. 22). It enabled doctors from the county hospital to earn a fee at the market rate and for the THC to earn money from supplying the equipment. It also enabled the THC to build its reputation for providing relatively sophisticated services.

Through the purchase of new equipment and the invitation of county doctors to provide more sophisticated services, the THC could provide a broader mix of medical care services. This was not fully consistent with the defined role of THCs in the three tier health system. However, it was encouraged by the combination of the exposure of THCs to market forces and the rapid growth in funding for NCMS, which reimbursed acute care delivered by township facilities at relatively high rates in comparison to those by county hospitals.

Problems with the Coping Strategies

The above review of the behavior of the THC is consistent with the view that organizations survive by managing demands of interest groups on which they depend

for resources and support (Pfeffer and Salancik 2003). The NCMS created new funding opportunities, but the center's effective management of the demands of the local government and of farmers enabled it to benefit from this opportunity.

Some aspects of the behavior of the THC are problematic in terms of the overall development of the health system. First, its success in adjusting to the policy environment and creating an environment more favorable to its survival does not necessarily mean that all its behavior had social legitimacy. It acted as a key stakeholder in decisions about the allocation of NCMS resources, a de facto program implementer, and an indirect beneficiary. Underlying the bargains between the THC and local government is the interplay of power and interests and the influence of these conflicting roles on the outcome cannot be overlooked.

Furthermore, there are questions about the legitimate role of the THC as a provider of health services. In response to the challenge of raising money to meet the expectations of its employees and invest in buildings, equipment and training, the THC shifted the balance of services it provided in favor of those most likely to generate revenue. This led to an increasing emphasis on inpatient medical care. This change of function is in some conflict with the defined role of THCs within the three-tier health system. The response of many individual health centres to economic incentives, has led to an unintended change in the balance of activities in the overall rural health system.

The second problem is the neglect of the quality of services delivered. The focus of the internal management system of the THC on income generation has encouraged health workers to pay more attention to the quantity of services they provide, than to their safety and effectiveness. The authors found little evidence that the THC was monitoring the services provided in terms of quality or appropriateness of the drugs prescribed. In addition, the delay of the NCMS management team in establishing an effective framework to regulate the quality of services made it possible for the THC to divert its attention from this issue.

The lack of a regulatory framework does not completely explain the efforts by the THC to offer services beyond the professional ability of its health workers. The

decision to invite individual professionals from the county hospital to undertake more complicated surgical procedures is a challenge to the existing division of roles between county hospitals and THCs. This is an innovative informal arrangement that is outside the formal regulations. It is possible that these informal arrangements could eventually create new ways of organizing the division of responsibilities in rural areas. One can find a similar process of testing informal arrangements some of which eventually translated into new policies and regulatory frameworks in other sectors in China (Tsai 2002).

Finally, the issue of efficiency deserves more attention when performance of the THC is discussed. It would appear that the combination of a rapid increase in NCMS funding and the slow development of appropriate mechanisms to monitor and influence hospital performance has encouraged an inefficient form of medical care with unnecessary expenditure on both drugs and diagnostic tests.

Policy Implications

This review of the survival experience of a rural health organization in the context of health market construction in China confirms the importance of external control over organizational behavior as well as the ability of an organization to negotiate exchanges to ensure the continuation of needed resources for survival (Pfeffer and Salancik 2003). Its findings have several implications for policy making.

First, there is a need to evaluate the effectiveness of THCs in a rapidly changing rural health system. The study THC was struggling to meet its responsibilities as provider of both public health services and medical care. One of its strategies for increasing revenue generation led it to shift its balance of activities in favor of relatively sophisticated inpatient treatment in which its staff had only limited professional skills. In doing so, it neglected some core public health functions. When the THC acts as a competitor to the country hospital, its position in the existing system is called into question. At present, the needs of the rural population for basic medical services are met by village doctors at local clinics and their needs for acute care and more complicated medical interventions are satisfied by the professionally

trained doctors at the county hospital. With a semi-professional work force, the THC is unable to compete with the county hospital for quality medical provision. It also has difficulty in competing with the village doctors in providing timely and convenient services to villagers. The ineffectiveness of the THC in rural medical service provision is obvious. As a result, it is reasonable to build a policy context for a return of the THCs to their original mission of providing public health services and both primary health care and other community services. This needs to take into account the very different needs of a rural population made up increasingly of a growing number of elderly people who are suffering from a variety of chronic non-communicable diseases, many adults working in cities and their young children who are cared for by their grandparents.

Second, the shift in the balance of services provided by THCs reflects the limited capacity of the NCMS to regulate health services for quality and cost. Our finding of under provision of public health interventions and oversupply of others is consistent with observations on the fragmentation of the system and the problematic financing rules (Wagstaff, et al. 2009*b*). It also reflects the lack of a single authority with an overview of the development of the health sector and a capacity to influence investment decisions. In order to achieve the government aim of meeting the health-related needs of the rural population, the various levels of government, different government agencies and health facilities will need to clarify their roles and responsibilities. There is also a need to review existing regulations and encourage public participation in creating, applying and enforcing them.

Third, the fact that the THC acted as a stakeholder in the NCMS and the health workers acted as an interest group in local resource distribution implies the importance of creating appropriate incentives for them to act in the interests of the population they serve. Our case demonstrates the damaging effect of self-seeking conduct of the health workers (Ferrinho and Van Lerberghe 2000). The government needs to give more attention to the training and post-training support of health workers. The impact of attempts to influence their performance by altering payment mechanisms will be limited by both their clinical skills and the values they have

learned from colleagues and role models. Moreover, in the absence of a professional organization that represents health workers in negotiating benefits and protection, policy makers should consider including them in the policy making process as a major actor in service financing and planning.

Finally, this study describes the construction of the institutional arrangements for a health market in rural China. The interaction of market forces and political interventions, has resulted in the emergence of a quasi-market in China's health sector. This term is used to describe a type of welfare provision mechanism characterized by service provision funded by government and delivered by contracted service organizations (Glennerster and Le Grand 1995). The quasi -market for health care in rural China can be characterized by a lack of separation of the roles of provider, purchaser and regulator of services and the great importance of informal relationships. It is only in this context that the behavior of the public service organizations can be understood.

Concluding Remarks

By demonstrating how the transition to a market economy since the 1980s affected the institutional arrangements for a THC in China in terms of funding, incentive, and regulation and how the THC managed to survive the reform pressure, this study extends the existing research beyond the scope of the identification of the adaptive strategies to understanding the implications of the strategies in terms of efficiency and legitimacy. Despite the limited scope of the observations, the study provides some in-depth information that allows us to argue that while the state's policy plays a crucial role in shaping the direction for development, it is the institutional arrangements that influence the capacities of the rural health organizations to implement the policies. The findings of this study are important because health system reforms can be better explained with an understanding of organizational behavior at the micro level in a context of interaction between market and political forces in modern time.

The rapid implementation of China's rural health reforms is likely to lead to

further policy development. The government has rapidly increased its financial allocation to NCMS from 30 yuan per capita in 2003 to 120 yuan per capita in 2010 (Ministry of Health 2011). It has announced several policies aimed at influencing the performance of THCs. It has also launched a new program to strengthen public health services, which includes a government allocation of 15 *yuan* per capita to support a combination of preventive services and high priority primary health care. These services are provided mostly by village clinics and THCs. It has ended the right of hospitals to earn a profit from selling drugs. It has expanded the mandate of NCMS to include outpatient care. It is actively exploring ways to provide health workers with clinical guidelines and enable NCMS to monitor their adherence to these guidelines. These additional policies are further altering the institutional context within which THCs are embedded. Policy-makers need to understand the multiple influences on health workers and their facilities, and take institutional factors into account as they design policies and strategies for implementing them.

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