

## Chapter Six

# ORGANISATIONAL AND POLICY ENVIRONMENT

In the previous two chapters, I have identified and delineated some of the shortfalls of the CHS programs, dealing first with the organisational arrangements and then with the performance of community health practitioners. In this chapter, I examine the wider organisational and policy environment framing these problems. Although training needs are the major concern of my study, training by itself will not improve the performance of CHS unless the wider organisational and policy environments are re-aligned in support of this goal. However, this is also part of the challenge of community health practice, particularly for managers. Accordingly a training program which assists practitioners and managers to at least understand the underlying organisational and policy issues may contribute more than one which is oriented solely around clinical services and programs.

The findings presented in this chapter focus mainly on the policy and administrative environments, including factors associated with regulators and purchasers, providers and consumers. The training issues will be discussed in Chapter Seven.

### Organisational failings

#### **Contradictions between political rhetoric and the lack of financial support from governments**

Some interviewees believed that the governments had announced a series of good policies to encourage the development of CHS but these policies were not being well implemented at the local level. Developing CHS was perceived as a political task, not simply something that the health organisations were trying to achieve. *“Our hospital has adopted this approach (CHS). You have to develop CHS, whether you want to or not.”* (president, district hospital). Some managers believed there were no incentives to motivate the CHS practitioners. Most policies were rhetoric that could never be realised.

*In terms of CHS, we have relevant policies, but the implementation falls short. We are one health institution, but the insurance scheme still deals with the hospital and the CHC independently [...]. We're recognised by the insurance scheme as both a hospital and a CHC in the same location (although CHCs outside the hospital are not recognised). But actually, we can not separate so easily the activities of the hospital and the CHC. The CHCs are built on the existing hospital model, which is different from establishing a new model. (president, district hospital)*

*The president of our hospital understands our difficulties, so he has some policy incentives. (director, hospital-sponsored CHC)*

*We are allowed to charge some fees in community services, which can be used to support our bonus. (director, enterprise-sponsored CHC)*

*There are some policies in the hospital to encourage staff working in CHCs, in terms of bonus, housing and professional promotions. However, it looks like a balloon, you can never reach it. You jump two steps, it rises two steps. You jump one metre, it rises two metres. You will never get it. (director, hospital-sponsored CHC)*

Many interviewees saw the financial difficulties of CHS as evidence of a failure of policy implementation. Most interviewees believed that CHS should be financially supported by the governments. As viewed by one GP, “*the government must support and steer the direction of CHS, or else, the CHCs will become another set of specialised clinics or hospitals.*” (GP, enterprise-sponsored CHC). It was not unusual to hear complaints about the shortage of governmental funding. Since the CHS accountability had been devolved to the municipal and local health authorities, governmental funding depended on the financial capacities and willingness of each local health authority.

*The investment from the local health authority depends on the financial capacity of each health authority. We have more than 70 staff and more than 40 retirees. The local government can't provide a full budget for us due to their limited financial capacity. We could get around 20,000 yuan per year in the past. There is no budget for new staff, although they are also governmental employees. Their medical expenditures cannot be reimbursed in the insurance scheme either. We have to support them. Last year, the district health authority increased our funding*

*by several tens of thousands of yuan. The investment is increasing step by step but it depends on the district budget. (president, district hospital)*

*It's still difficult to balance our budget. Many services are free. Without support from government and others bodies such as through university projects, we will face great pressure. (GP, independent CHC)*

Hospital sponsorship of CHS was thought to be a strategy that could ease the financial burden of governments while still achieving the goals of reallocating health resources. In reality, however, new investments (by governments and by hospitals) were located in already over-resourced urban communities. Less profitable services were commonly neglected and no hospitals would willingly abandon existing profitable services. This resulted in more efficiency problems. As a municipal health official said, *"I would prefer to close the inpatient services of all of the small and medium size hospitals that are supposed to sponsor CHS. But it's impossible. How could they survive? I have no money to fully finance them."* Consequently, most CHS-sponsoring hospitals transferred only part of their operations to the CHCs.

*It's too difficult in our country to develop CHS. The first obstacle is the lack of investment. It's relatively easy in Shanghai and Shenzheng, because they have financial resources. Our success is partly due to the [project] investment. Beijing and Shanghai also have kept a good infrastructure for developing CHS. They have saved their street hospitals very well, which provide a foundation for the CHS. But in Chengdu, the private clinics spread everywhere. Our community has the same situation, with lots of private clinics and pharmacy retails. Since we implemented CHS, we have forced over ten private clinics to move out. (GP, independent CHC)*

### **Failure to factor into policy development the lessons of successful pilot studies**

Although China had successful experiences in many aspects of CHS, they have not been incorporated and integrated within the current CHS reform. For example, the community based mental health services (Heqin and Mingdao, 1990; Pearson, 1992; Qiu, F. and Lu, 1994; Wang, Q. et al., 1994; Wang, X., 1994; Xiang, M., Ran and Li, 1994; Zhang, M. et al., 1994) and community based rehabilitation (Ran et al., 1992; Zhuo, D. and Kun, 1999) had achieved great success in some pilot communities. These programs used non-specialists and informal carers as core service providers and proved to be

effective and practicable (Chi, B. and Huang, 1999; Zhuo, D. and Kun, 1999). Moreover, they all relied on the existing local community resources rather than CHCs, obviously deviating from the current CHS models. These successful experiences formed a sharp contrast to the weakness of the CHS in mental health and rehabilitation services (see details in Table 5-4 in Chapter Five). Clearly, there is a need to improve the leadership. Strong committed leadership is critical to the success of CHS programs (Afo, Thomason and Karel, 1991)

*Direct Ou paid lots attention to CHS activities before he retired. Now we are restricted to doing clinical work (in shifts) and home visits. We don't know anything else. (GP, hospital-sponsored CHC)*

### **Hierarchical arrangement and lack of inter-governmental collaboration**

A two-tier health care delivery network, consisting of CHCs and hospitals, was proposed by the government (MOH, 1998). According to the government policies, CHCs were to be developed by transforming existing health facilities (MOH et al., 1999). Wang Longde (1999), vice health minister, pointed out in a CHS workshop that mobilising existing community resources should be a priority in developing CHS and that duplication and overlap of resources should be avoided. A common approach adopted all over China to avoid duplication and overlap of resources was to allocate particular geographic catchments to particular CHCs (Changchun Health Bureau, 1999; Chongqing Health Bureau, 1999; Liu, S.N. et al., 1999b; Shi, Y.X. and Pang, 1999; Wu, X.Y., 1999b; Yang, T., 1999a; Chen, J. B. and Hong, 2000).

### **Community health services and local government**

The hierarchical and insulated institutional arrangement has resulted in many adverse consequences. As mentioned earlier, the CHCs were governed by the local health authorities, whilst community development was an accountability of the authorities of civil affairs. This contributed to a biomedical bias in the approach of the CHS. Since the MOCA had developed a community service system managed by the SAOs, providing social supports to poor, unemployed, disabled, and elderly people, the majority of CHCs became purely medical facilities. In 2001, according to the 2002 statistical report, China had 8820 community centres and 192,000 community service

facilities (MOCA, 2002). Although social services had been recognised as essential in achieving better health outcomes, the CHS were rarely incorporated and integrated with the community services since they were situated in different hierarchies. Most CHCs I visited were completely independent from the community centres. Only one CHC was located in a community centre. However, notwithstanding its location this CHS remained isolated from other community activities both financially and administratively<sup>98</sup>.

*We have contacted the department of civil affairs, because they are familiar with the community. They can provide data about the community [... ..]. However, our activities are isolated from other community activities [... ..]. Although we are in the same buildings, we have few contacts. (director, hospital-sponsored CHC)*

Many interviewees described difficulties in approaching the communities without support from the SAOs. Bypassing local government commonly resulted in failure in organising community activities. Some interviewees described the difficulties they had experienced in negotiating with the SAOs and residential committees, in settings where relationships (guanxi) played important roles.

*The CHS should be directed by the government. But we feel lonely. It's difficult for us to implement the CHS by ourselves. After my study in the CHS training program, I felt that the CHS would benefit our residents [... ..]. I intended to work out a good approach. But it's very hard to depend all on ourselves. I reported to the SAOs and expected to get the support of all the residential committees and work units. We printed 8,000 survey questionnaires and distributed them to each residential committee in a meeting. The result was far from our expectations. Only 200 questionnaires were filled out. We did not get any reward for such a hard work. I was told that the CHS should be one of the criteria for evaluating local government performance. But when I went to the SAOs to inquire about this, they hadn't organised any meeting yet. The first time I attended they said 'no', the second time the answer was 'no' too. Without their support we couldn't organise any activities. (director, enterprise-sponsored CHC)*

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<sup>98</sup> In Shanghai, the SAOs provide offices for about 69% of CHCs (Wu, G. Y., Gong, Y. L., Lu, F. J. et al., 1999b).

*The community government does not manage the CHCs. We have to beg for their assistance. Actually, it's extremely difficult to obtain help from the SAOs. It's relatively easier to seek help from the residential committees, because we offer some free services, such as creating free health files, or entertainments on holidays for them. (assistant director, hospital-sponsored CHC)*

*It's impossible to work in communities without the help of residential committees. If coordinated by the residential committee, our activities in the community will be easier. That will convince many residents to accept and understand us. It's very important to coordinate with residential committees. Therefore, we go to the residential committees each week to ask for their comments and suggestions and to investigate their needs and demands, such as the elderly people and disabled people who need our help [... ...]. It's impossible to work in communities without the help of residential committees [... ...]. You have to pay home visit to conduct baseline survey. The residents will not answer you if you are not accompanied by members of residential committees [... ...]. So we have to depend on them. (assistant director, hospital-sponsored CHC)*

*We are managed by the SAOs. But they don't know anything about health care. They are not trained. Sometimes when we tried to communicate with them, they just don't understand. (director, enterprise-sponsored CHC)*

The roles of SAOs varied widely. While many CHCs found it difficult to get any assistance from the SAOs, a few SAOs viewed CHS as their own businesses and invested in CHCs. For example, three CHCs got 100,000 yuan support from the SAOs in their first year of implementing CHS. One SAO invested 1.1 million yuan in CHS over a two year period (Yin, H., 2002). Some SAOs contracted with the CHCs to take care of the elderly people who were eligible for social welfare. Being supported by these community governments, access to the communities and organising community activities became relatively easier and more acceptable.

*This district is different from other districts. Our local government pays a lot of attention to CHS. The head of the CHS office is the director in charge of health affairs in the district government; deputy heads include directors from the SAOs and the DOCA. The residential committees are supervised by the DOCA. In each street, a CHS office has been established, led by the directors of SAOs and deputy*

*heads from hospitals and relevant governmental departments, including family planning, city planning and managing, civil affairs and legislation. Members include residential committees and relevant work units. The SAOs issue policy documents regarding CHS. Implementing CHS is one of the criteria for the evaluation of governmental performance. The CHS offices organise meetings involving all residential committees, member units and group heads, to explain the significance, components, requirements, and pattern of working and so on. Afterwards, we begin the home visits and baseline surveys. In terms of hospitals, we also set up a CHS department, which aims to change the role of clinicians. All of our physicians will be changed into community physicians gradually. (president, district hospital)*

### Competition or collaboration?

Weakness in horizontal collaboration and poor coordination between hierarchies have been longstanding problems within the health system. In some respects this has been actually exacerbated through more intense competition following the introduction of CHS. One of the official goals of CHS was that “70% of community residents should be able to visit CHCs within 15 minutes of walking distance” (MOH, 2001c). This declaration appeared to disregard the fact that two years earlier the same ministry had declared that 70% of community residents were already “able to find a medical facility within ten minutes of walking distances” (MOH, 2000c). Obviously the introduction of CHCs has exacerbated the existing competition between hospitals, private clinics and other health facilities. Even where the private sector is allowed to be involved in CHS, they are encouraged to establish comprehensive CHCs rather than to provide complementary services such as nursing homes that have been identified as elements of local health service networks (MOH et al., 2002). The full six functions were commonly cited by interviewees as one of the criteria for examining the eligibility of providers who tried to identify themselves as CHS providers. By contrast, the inter-relationships between CHCs and other community resources in terms of the six functions were rarely examined.

*Now, some private hospitals, hospitals for profits, are also involved in (the CHS). But they don't cover the whole range of functions. They totally focus on competing for patients. This is also a problem. If you are sick, when you come, I can*

*admit you in the network and give you services. But that's absolutely different from our health-centred concept of community health. They take CHS as a way of competing to attract patients. (president, district hospital)*

CHCs are managed through the hierarchy of the DOMCH. This hierarchy has no authority to issue instructions to secondary and tertiary hospitals that might have sponsored CHCs or to private practitioners directly. The six functions assigned to CHS are also being addressed through several parallel hierarchical systems, including hospitals, EPS (or CDC), and MCH. In addition, there exist other health resources in the communities governed by the industry systems. These multiple hierarchical structures made health planning and coordination of services extremely difficult.

*Preventive care services, including maternal health care, are provided by the department of preventive care. We have not much connection with them. They are independent. Theoretically, this should be one of the components of CHS. However, it is currently a special project, independent from the CHS [.....]. The staff in the department of preventive care are not administratively managed by CHCs. (GP, hospital-sponsored CHC)*

*We do cover all six components of CHS. However, we do not organise our activities focusing on a specific objective. Our activities are divided into three independent groups: prevention, care, and clinical practices. (assistant director, independent CHC)*

*Activities in our centre are not integrated and oriented to a uniform object [.....]. The preventive service, health care, and clinical services are all separated. But we do cover all six aspects. (assistant director, independent CHC)*

*There are some factories around this community, but they have their own staff hospitals or clinics. Most health services are provided by themselves. Their staff don't visit our centre. (assistant director, hospital-sponsored CHC)*

*We can't access local work units at or above the city level, because their contract health providers are usually the third or first city hospital. It's difficult to access these communities. (president, district hospital)*



Community pharmacies: a forgotten corner

The increasing medical expenditure formed a great financial barrier for consumers to seek medical help. In my survey, almost half of the residents with recent health problems had not seen doctors. This result is consistent with the findings of two national health surveys, which demonstrated that the proportion of residents with recent health problems who did not see doctors increased from 42.4% in 1993 to 50.1% in 1998 (MOH, 1995; 2000c). A significant proportion (12.2%) of people with recent health problems who had seen doctors reported that their doctors worked in pharmacies. As a matter of fact, pharmacy services have always occupied an important position in the health service delivery system in China (Beach, 1999; Meng, H. R. and Zhun, 2002). China has a strong cultural environment to encourage pharmaceutical consumptions (Beach, 1999). Since the IHSAs are virtually private accounts and cover expenditure through community pharmacies, it was inevitable that the new insurance scheme would encourage consumers to bypass hospitals, clinics, and CHCs and look for cheaper alternatives in the community pharmacies. Paradoxically, the role of community pharmacies has never been systematically addressed in any of the policy documents dealing with different aspects of primary care.

While community pharmacies were ignored in the implementation of CHS programs, pharmacies were actually built into the CHCs to compete with the community pharmacies. Actually, profits from the sale of drugs had always been an important source of revenues for medical institutions in China. It is widely believed to be one of the main factors contributing to the rapid increase of medical expenditures in recent years (Beach, 1999). Two policy strategies have been adopted in recent years to hold down the drug sales as a source of hospital revenues. The first strategy was the separation of hospital revenues from medical services from those from drug sales (Office of System Reform of State Council et al., 2000; Zhang, W. K., 2001b). Pilot trials in Beijing showed that the share of drug sales in hospital gross revenues decreased by just under 5% (Zhang, W. K., 2001b). The second strategy was to organise collective bulk purchasing of drugs through auction, which led to price reductions of between 15 and 30% (Zhang, W. K., 2001b). According to the national policy, the profits made by hospital pharmacies should be transferred to the health authorities. The health authorities then decide on an appropriate proportion to be returned to the hospitals. The remainder

is expected to be directed for use in CHS and public health services (Office of System Reform of State Council et al., 2000).

Meanwhile, however, the government was also concerned about the likelihood of CHCs becoming pharmacies. The variety and brand of drugs kept in CHCs was restricted. In Chengdu, CHC pharmacy stocks were restricted to the list of essential drugs established for the social medical insurance scheme. In Shenzhen, the revenue from pharmaceutical sales was not allowed to exceed 60% of the gross revenues (Shenzhen Health Bureau, 1998). A few interviewees complained about this policy and believed that this contributed to the consumers' bypassing their CHCs, especially where many community pharmacies employed doctors to provide immediate medical evaluation (Beach, 1999). In recent years, the health authorities have attempted to prevent doctors from working in community pharmacies, despite the fact that some CHCs had owned or collaborated with the community pharmacies. As explained by the health officials, community pharmacies were not medical facilities because they were not registered in the health authorities. The pharmacies were usually regulated by the pharmaceutical authorities and run as economic entities. Doctors in China could only work in a registered health institution. Traditional Chinese medical practitioners are exempt; they may work in pharmacies, subjecting to the approval of the health authorities.

*People thought that we could provide all sorts of drugs. But actually, we have been restricted to only 300 types of drugs. (assistant director, independent CHC)*

#### Residential permit system: an administrative barrier for servicing people on the move

Theoretically, each CHC is responsible for everybody living in a certain geographic catchment. But traditionally public health projects and planned community activities are usually arranged in line with the household registration and residential permit system. As a consequence, such programs rarely cover those who live in the communities but are registered as residents of different districts, particularly rural migrant workers (who are registered in rural areas).

Household registration is managed by the local police stations. A few CHCs reported difficulties in getting assistance from the local police stations. They had to rely on community surveys to collect even the most basic demographic information.

*It's difficult to get population data from the police station. We tried to work with the police station, but they said they had to keep those data secure. (director, enterprise-sponsored CHC)*

### **Excessively rigid and centralised intervention**

Government saw CHS as a “project to win people’s heart”<sup>99</sup>, a political signal of a commitment to reduce the disparities in wealth and health. Accordingly, there was strong political and administrative pressure from top-to-down to force selected hospitals to establish CHCs. The health authorities usually had developed yearly plans for the setting up of CHCs. A number of CHCs had to be established each year. These tasks were allocated to each selected hospital. Most hospitals tried to use existing resources to avoid building or renting new facilities, which would be a greater financial burden. However, hospitals were usually instructed by the health authority to sponsor several CHCs, forcing these hospitals to invest in capital assets. The rapid and frequent change of urban extension plans also posed some risks for these investments.<sup>100</sup>

*We had two communities in the past, now we are assigned a total of five communities. Two of them have been running for almost two years. Another two have been just assigned to us in March last year. We are now preparing all sorts of works. We are doing baseline survey in one of the new communities. It's difficult to find an appropriate location and buildings, with 400 m<sup>2</sup> space as required by the health authority. The local government cannot afford the houses. We have to invest by ourselves. However, we do not stop working [... ...]. We set up CHCs according to the population, that is one centre covers 30,000 population, a standard of health authority. (president, district hospital)*

*Our hospital wants to demonstrate our compliance. You have to set up CHCs. It's a task, a political task from the government. If the government orders us to*

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<sup>99</sup> In Mandarin, it is called Min Xin Gong Cheng.

<sup>100</sup> The locations of CHCs were determined by hospitals. Sometimes, the hospitals had to change their locations of CHCs because of the reconstructing of residential communities.

*establish more CHCs, we will not be able to afford it, but we have to follow it as a political order. (GP, hospital-sponsored CHC)*

*They (hospital staff) consider the CHS as a political game. You have to develop CHS as a political task, but there is not much of a horizon in terms of career development. Many hospital staff came to the CHCs as a break from real work, almost a vacation. They don't want to do anything. They just feel bored. (director, enterprise-sponsored CHC)*

In contrast with the gradual loosening of direct control over hospitals (Bloom and Tang, 1999), the health authorities have maintained very tight control over CHS. The health authorities frequently, if not always, bypass the parent hospitals of CHCs to govern CHS activities. As described earlier, a standard protocol for the work of CHS was promulgated which involved great workload for the CHCs. Some interviewees complained about the huge amount of home visits, time-consuming surveys and too many instructions to follow. Actually, the majority of CHC staff did not have a clear perception about the purposes of many of these activities, such as community survey and diagnosis. This led to discontinuity and fragmentation of such activities, deviating from the designed protocols.

Some interviewees saw the direct involvement of governments in CHS as part of a strategy for regaining control over hospitals. Although a few interviewees speculated about CHCs exercising more influence over the work of the tertiary hospitals, many interviewees noted the financial consequences for all hospitals of a reduction in hospital visits with the implementation of the new insurance schemes. Given this background, it was commented that the CHCs were serving in the front line of the battles between hospitals in attracting patients.

*The CHCs will divert some patients from the outpatient department of hospitals. (GP, enterprise-sponsored CHC)*

*If our hospital is independent from our company and is required to make money, they will try to strengthen contact with us. Right now, they are not required to make money, so they don't care about our referrals. Our patients are now willing to be hospitalised, because whatever the cost is, the patient only pay a maximum of 500 yuan out of the pocket. (director, enterprise-sponsored CHC)*

*We are a member of this community. In the future, if our own hospital can not provide quality services for our patients, let's say, for the patients with heart and vascular diseases, we will not refer our patients to our hospital. We will refer our patients to others where our patients can get quality services. We will consider the outcomes of our patients. So, I can say that the CHS require a higher standard for our hospital. (director, hospital-sponsored CHC)*

The centralised arrangement was thought to be an effective tool to avoid duplication and waste of resources. But when it encountered low motivations of providers, it actually led to lower efficiency in practice and a waste of resources. One example was that while some hospitals were requested to set up new CHCs, some of the existing CHCs were not recognised by the health authorities. The standards for the registration of CHCs were slightly different in the two municipalities but were all based on subjective judgments. At the time when I conducted the study, tertiary hospitals were encouraged to set up CHCs in Panzhihua, but not in Chengdu. One CHC set up by a university hospital was not recognised by the health authority as a CHC, although it had existed for several years<sup>101</sup>.

*Health services must be associated with financial benefit. Unlike the past, we can't afford to provide services for free. Right now, our financial situation is not so good. We charge too little in making contracts with residents. According to the terms and conditions of our contracts, we have to pay home visits six times per year. We collected a total of 20,000 yuan, which cannot meet our expenditure at all. We must provide pagers for our staff members, sometimes, we have also to pay travel costs. (director, enterprise-sponsored CHC)*

The CHS programs rarely evolved from communities. The tightly centralised control made them more like a unified project. For example, chronic illness had been identified in the government documents as a high priority of CHS programs.

*The main chronic conditions in the communities include: hypertension, diabetes, COPD, stroke, coronary heart disease, and cancer [.....]. They [CHS*

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<sup>101</sup> The most recent policy encouraged all types of health organisations to establish CHCs (MOH, Office of System Reform of State Council, State Planning and Development Committee et al., 2002).

*priorities] can also be top five severe diseases that threaten the health of community residents. (Sichuan Health Bureau, 2001)*

The strong statement of health priorities discouraged CHS practitioners from working out their own local priorities. The added note “*they can also be the top five severe diseases that threaten the health of community residents*” were frequently neglected by many CHS workers. This was reflected in the responses of the interviewees. When I asked “What are the main health problems in your community?”, most interviewees reported hypertension, diabetes, COPD, coronary heart diseases, cerebrovascular diseases and cancer as the main health problems, which were absolutely consistent with the government policy statement, although the reported order of these problems might vary from each other. Some put hypertension as a top priority, others put diabetes or COPD as top priority. As a matter of fact, these reported priorities were rarely produced through community diagnosis. Indeed, management of chronic illness has become the top priority for many CHCs throughout China (Chi, M., 1999; Liu, C. J., 1999; Wang, R. and Meng, 1999).

Besides the centralised control of the components of CHS, the procedures of many services were also pre-defined. For example, the community diagnosis was simplified. Epidemiological survey and analysis became the only approach to community diagnosis (Sichuan Health Bureau, 2001). This approach put strong emphasis on ill health and was not really consistent with the health promotion philosophy. Meanwhile, other approaches such as social health assessments, qualitative data collection and economic evaluation (Billings and Cowley, 1995) were neglected in the government guidelines (Sichuan Health Bureau, 2001). Unfortunately, these approaches could have provided practicable and valuable indications of needs and priorities and could have helped health managers to plan community activities (Billings and Cowley, 1995). Although the qualitative approach to community diagnosis has been criticised by some researchers on the grounds that it does not help in determining appropriate levels of care and that it has great potential for bias (Buchan and Gray, 1990), it is still important in explaining the collected data and in understanding the implications of these data for consumers (Billings and Cowley, 1995).

### Arbitrary pricing creating perverse incentives

Reducing financial barriers to accessing health care was one of the purposes of the CHS reform (MOH et al., 1999). The health authority expected that financial affordability could be achieved through strict regulation on prices and tax exemption of CHCs (MOH et al., 2002). In reality, however, there were no practicable price regulations set up which would ensure that CHS sustainably provide less expensive services.

*We changed our drug price twice from higher to lower in order to find a price that the residents can accept. The price authority has no idea about the CHS charges. We cannot adopt the hospital charges. They expect us to provide some evidence in regulating the price of CHS. (assistant director, independent CHC)*

Since most CHCs were attached to hospitals, hospitals virtually controlled CHS prices. Most hospital-attached CHCs had no autonomy in purchasing supplies. All supplies, including drugs and consumable materials were distributed by the parent hospitals. The CHCs had to follow the hospital procurement policies. Some interviewees believed that the hospital sponsorship was one of the barriers to cutting prices.

*Patients feel that the drug price is too expensive, because all the drugs are provided by our hospital. (GP, enterprise-sponsored CHC)*

*We decided the charge rates although with wide variation allowed. Because in Panzhihua, the economic situation varies considerably between districts, it's not a good idea to set a unified charge rate. Therefore, each CHC can decide an appropriate charge rate within the standard range. However, Panzhihua Steel Company requires a uniform charge rate throughout the company. The CHCs are not allowed to adopt a different charge rate. (health official)*

Pricing decisions have in many cases been quite arbitrary and have created perverse incentives and distorted service delivery. Many interviewees believed that the charge rates of some services, especially those for preventive purposes, could not compensate for their costs. Some were even free of charges. Given the low input from governments, the CHCs had to subsidise the planned community activities through revenues generated from clinical services and subsidise the labour costs (which were usually charged below actual costs (Hsiao, 1995)) through revenues generated from pharmacies. This result

was confirmed by other studies (Luo, L. et al., 1999a; Bao et al., 2000b; Wu, G. Y. et al., 2001; Jiang, Y. M. and Meng, 2002). One costing study in Baoding showed that pharmaceutical sales accounted for about 77% of the gross revenues of CHCs (Liu, H. S. et al., 2002c). Pharmacy was even more important for small CHCs, where drug sales revenues might comprise as much as 84% of the gross revenue (Liu, H. S. et al., 2002c; Liu, H. S. et al., 2002d). In Beijing, pharmaceutical sales were estimated to contribute to 60-70% of total revenue of CHCs (Li, M. C. et al., 1997a; Wang, M. et al., 2000b). It is widely believed that the rigid governmental control over fee levels for most procedures, (adopting low fee rates below the cost) and the adoption of a fixed markup rate on drugs (15-20%) and high fees for services for relatively sophisticated equipment have created strong incentives which encourage oversupply of expensive services (Xiang, Z. and Hillier, 1995; Bloom, 1997, p. 9; Zhan et al., 1997; Bloom et al., 2000, p. 12; Meng, Q. Y. et al., 2002, pp. 28-30).

*We pay home visits every two months, including for the systematic management of chronic conditions. We never charge one cent for the home visits, never. We only charge some contract fee for those who make contracts with us. No matter making contracts or not, we are always providing services in managing chronic conditions, which include hypertension, diabetes, psychiatric diseases, and cerebra-vascular diseases. (director, enterprise-sponsored CHC)*

## Conclusion

While CHS have been described as a high priority in the policy documents, corresponding measures that are critical for facilitating the implementation of CHS have not been put in place. The governments have failed to factor into policy development the lessons of successful pilot studies. Instead of providing budget supports to the CHS programs, the governments have instructed hospitals to sponsor CHS through a well-structured hierarchy. However, such arrangements have not changed the dysfunctional organisation of service delivery due to distorted pricing policies and the fee-for-service mechanism. Moreover, community needs have not been well addressed due to the poor collaboration and coordination between different parallel hierarchies.



## Overdependence on general practitioners

The CHS reforms in China heavily depended on GPs. Theoretically, GP-directed CHS might contribute to the coordination of various health services and prevent fragmentation of provision (Liang, W. N., 2000; Glouberman and Mintzberg, 2001). However, the government expectations of GPs were too high to be achievable.

### Diversity of consumers' needs require multiple providers

Although the CHS were expected to provide comprehensive services, it is likely that these could only be achieved through multidisciplinary team efforts. The overdependence on GPs has led to the pattern of services provided deviating significantly from consumers' needs. For example, there is a big need for services to address musculoskeletal problems in one of the communities of my research (Chen, B. W., 2000a) but the lack of allied health professionals has led, at least partly, to the neglect of these problems by the CHCs.

The monopoly of GPs created a great obstacle for other health professionals to contribute to CHS. Traditional Chinese Medicine was encouraged by the governments as one of the services to be provided through CHS (MOH et al., 1999; MOH et al., 2002). Huo and colleagues (2001) argued that the underlying philosophy of Traditional Chinese Medicine is consistent with the principles of CHS. Interestingly, the traditional Chinese medical practitioners also seemed to be more interested in CHS than their western trained counterparts. In a residency training program in one CHC, four out of five trainees came from the traditional Chinese medical backgrounds. However, this did not mean that the CHCs intended to provide more traditional services. Actually, those traditional practitioners were required to be transformed into GPs.

*I graduated from Chengdu Traditional Chinese Medical University. After graduation, I worked in JG Hospital for three years as an internist. Then, I changed to bone surgery. After eight years in surgery, I moved to this work unit and began my career in pre-marriage physical examination and CHS. (assistant director, independent CHC)*

*We can provide diagnosis and treatment of common diseases, as well as injection, intravenous drips, acupuncture and physical therapy for our patients. In terms of the balance between traditional Chinese medicine and western medicine,*

*it's almost half to half. The elements of western medicine may possibly be a little bit more. (GP, hospital-sponsored CHC)*

Efforts to transform traditional Chinese medical practitioners into GPs could be explained by the fact that many of them are trained to act as integrative practitioners of Western and Chinese medicines. However, the attempts to require people trained as PHWs to serve as GPs<sup>102</sup>, rather than employ them in preventive work can only be explained by the excessive policy emphasis on the role of GPs.

*The current preventive staff are not competent in serving as GPs. I had requested one of the preventive staff to take responsibilities in the outpatient clinics. He had to work independently. One month later, he told me that he couldn't do it. (assistant director, independent CHC)*

### **General practitioners: not attractive career option**

Most medical professionals held negative attitudes to GPs. Hospital doctors were usually reluctant to be transformed into GPs. As a matter of fact, the prejudice among medical professionals against the specialty of general practice is an international issue. It is thought to be too easy and too broad (Barkun et al., 1993).

### **GPs were seen as barefoot doctors and equivalent to low quality providers**

GPs were seen as someone who seemed to know a bit of everything about health, but were superficial and not professionalised. Despite the great efforts of recent years in promoting GPs as a health professional stream paralleling to other subspecialties there existed a common view among both hospital specialists and GPs that GPs were not comparable with other subspecialties. Many people regarded GPs as comparable to bare foot doctors.

*The hospital staff have not changed their attitudes towards us. They look down on us. They feel that they are better than us. (GP, enterprise-sponsored CHC)*

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<sup>102</sup> Similar attempts of turning PHWs into GPs were also made in other regions of China (Ji, Z. M. 1999). But some researchers believed that clinicians were more appropriate to take the roles of GPs (Gong, Y. L., Wu, G. Y., Yan, F. et al., 1999).

*In terms of professional development, we sacrifice a lot. After so many years working in the CHC, I am not able to compete with other specialists any more, if I return to hospitals. In the western countries, GP is one of the specialties in medical professionals. But in our country, GP is a “bare foot” doctor who is an all-rounder without much skill. (GP, independent CHC)*

*They (hospital staff) think that the CHS are really important, but the GPs are less qualified than specialists in clinical skills, although they may have a broader range of knowledge. (director, hospital-sponsored CHC)*

### Poor opportunity for career development

CHCs were perceived by many interviewees as poor work environments and working in CHCs were seen in terms of lost opportunities for career development. Hospital physicians worried about loss of skill if they were transformed into GPs. As one interviewee said, “*if a doctor is sent to CHCs, he/she will certainly lose some clinical skills*”, since “*there are no difficult cases in the CHCs*”. The diversity of patients attending CHCs were thought to be less (instead of more) than those attending hospitals, because many patients do not seek first contact medical help from the CHCs. Many managers believed that hospital staff should be more highly trained because of the more difficult and complex diseases they had to deal with and in turn that the health workers with poorer educational backgrounds (eg. lower degrees) should work in CHCs. Meanwhile, GPs had a strong feeling of sacrifice. They were busy and working hard with poor remunerations.

*We think that the hospital staff should have higher degrees, because they are more academic, they have to deal with more difficult and complex cases. We, however, are in the community. The range of diseases that we see is limited. (director, enterprise-sponsored CHC)*

*We are supposed to be shareholders of our institution, but we actually don't hold anything. I think that we should have, it could encourage us to think of the CHC as our own. In a short period, you couldn't get much profit and let everybody satisfied. It's impossible. Maybe we could make use of the profit sharing mechanism, give some stocks to GPs. Even if I leave the centre later, I will still have*

*stocks here. The doctors will be more active and like to work here more. (GP, independent CHC)*

*Hospital staff do not want to come to CHCs, because it's too hard and busy. (director, hospital-sponsored CHC)*

*The hospital staff pay more attention to the reform of insurance schemes. They don't care much about the CHS. (director, enterprise-sponsored CHC)*

Although a few doctors were aware of the advantage of CHS in providing for the continuing management of chronic diseases, the recently introduced medical registration arrangements discourage doctors from working in CHCs. The registration for doctors was categorised into four groups: medical doctors, traditional Chinese doctors, dentists, and public health doctors (China, 1998). The national examination for the registration of medical doctors was set around hospital-based knowledge and skills (MOH, 1999d; e; Zhu, S. J. and Dong, 2000). Theoretically this was not necessarily an obstacle for the recruitment of GPs because they all came from hospitals and were not required to participate in the examinations for registrations. However, the CHCs would be less attractive for newly graduated medical students. Since all medical students have to find an institution to offer them a job and residency training once they have graduated, the success in the examination for registration would largely rely on the capacity of the institutions. Working in CHCs, particularly in independent CHCs would mean that they had to take a high risk of failing in the examination because of not being trained in the hospital environment.

*Some doctors who have three years of clinical experience feel that they can achieve much in CHS. Why? For example, they feel easy to monitor the blood pressures of patients with hypertension, which provide a good opportunity for them to watch the effects of their prescriptions on these patients. But in hospitals, all prescriptions are based on a transient and discontinuous pattern. They can hardly get feedback from patients. One doctor was really interested in it. (director, hospital-sponsored CHC)*

*In addition, the doctors are worrying about the uncertainty of promotion in titles, if they work in CHCs. (director, hospital-sponsored CHC)*

Less important positions in hospitals

Some interviewees complained about the neglect of CHS by senior managers due to their low profitability, which could be seen from the work arrangements. For example, CHCs within hospitals were sometimes located in higher levels of hospital buildings, while outpatient clinics were in the first floors. Without elevators in these buildings, patients rarely went upstairs. Meanwhile many interviewees complained about the shortage of staff in CHCs, which formed a sharp contrast with the overstaffing in hospitals.

*The governments know that the CHS can not produce profits. They pay more attention to the activities that can make money. No one cares about the activities that can not make money. (president, district hospital)*

*Only the managers who are in charge of CHS pay attention to it; others do not I think. (GP, hospital-sponsored CHC)*

*We work in the 4<sup>th</sup> floor. We can see few patients. You know, the patients don't want to climb to the 4<sup>th</sup> floor. If the patient has hypertension, the symptom will be worsened when he climbs to the fourth floor. (GP, enterprise-sponsored CHC)*

*One staff has to take several jobs. It's too busy. (GP, hospital-sponsored CHC)*

*We can't keep a continuing record of our patients because of the lack of staff. (director, enterprise-sponsored CHC)*

*We can only focus on clinical services, because of the lack of staff. There are too many outpatient visits. Our GPs have no weekend at all. (director, hospital-sponsored CHC)*

*Residents demand a lot. But we can only meet some of their demands. For example, without appropriate transportation, we cannot reach clients' homes as required. (GP, enterprise-sponsored CHC)*

*Sometimes I just can't go out, if we have patients here to take intravenous drips, especially patients with cancer. You must always focus on taking care of them. (GP, hospital-sponsored CHC)*

### **Inadequate skills of CHS workforce**

Given the negative policy environment, the resources available to CHS were usually quite limited. Exhortation and inspiration remained the key strategies to encourage people to work in CHCs. Most interviewees believed that developing CHS was an irreversible direction of the reform of the health care delivery system. A number of GPs thought that it was better to be involved in CHS earlier than later, because it was clearly a priority for both governments and primary hospitals.

*The whole environment is changing. The health system is reforming. We have to prepare in advance for the development of CHS no matter whether our hospital support us or not, even if we have no financial profits. (director, enterprise-sponsored CHC)*

*We, as health workers in the first tier institution, came to the CHCs because of two reasons: firstly, we have to follow the arrangement made by our heads; secondly, the CHS will finally be developed, although it's difficult currently. In general, the CHS has the potential to be developed. Hospitals can not get further development within the existing models. It's difficult to survive; you have to adopt the approach soon or later. Earlier is better than later. The hospitals have to adopt the approach. (GP, hospital-sponsored CHC)*

*Our government places a strong emphasis on CHS, with strong support and policy positive towards CHS. It's an opportunity for us to expand our horizon. (assistant director, hospital-sponsored CHC)*

*Society will gradually adapt to CHS. After more than one-year experience, our doctors began to accept CHS. Furthermore, it is a requirement of the medical market. (president, district hospital)*

*Our doctors are willing to work in CHCs, because I have told them repeatedly, that the CHS are a potential direction of development in health system, as well as the direction of career development of medical practitioners. (director, enterprise-sponsored CHC)*

The lack of incentives and poor resources available to the CHS workforce has inevitably impacted on the quality of CHS staff. The GP candidates were usually less

educated than their hospital counterparts. Most CHC doctors held just certificates of two or three year medical training. A few had only been trained through apprenticeships. This situation is consistent with other regions. Generally, about 70% of CHS practitioners had less than two years professional training and only 3-11% had bachelor degrees (Li, M. C. et al., 1997b; Li, S. X. et al., 1999a; Li, W. et al., 1999b; Luo, L. et al., 1999b; Yu, X. H. et al., 1999; Beijing Health Bureau, 2000; Li, M. C. et al., 2000b; Wu, X.Y. et al., 2000a; Xie, J., 2000; Zuo, 2001; Chen, S. X. et al., 2002a; Lang and Li, 2002). In Sichuan, the level of training of the CHS workforce was even lower. No more than 20% of CHS practitioners had tertiary (three or more years) professional training (Zhuo, K. X. et al., 2000). Even in the most developed regions such as Shanghai and Tianjing, fewer than 20% of GPs (12-19%) had medical degrees (Xie, J., 2000; Liu, L. H. et al., 2002e).

*In our district, the majority of medical practitioners don't hold medical degrees at the bachelor level. Young doctors, such as my age, are quite scarce. Most physicians are quite old. They usually followed tutors or their parents to study medicine. (GP, hospital-sponsored CHC)*

*All of our GPs had two or three year training in medicine, with only one exception in paediatrics and one in public health [.....]. Our hospital usually selects newly recruited staff first. Those who are left are then assigned to our centre [.....]. So the staff who work in our hospital hold higher degrees than those in our centre. (director, enterprise-sponsored CHC)*

In contrast to the emphasis on the GP's role in CHS, nurses were largely ignored. The quality of CHC nurses was usually thought to be as good as their hospital counterparts. Some interviewees even believed that their CHC nurses were better than average. But in fact, the role of nurses in CHS was underestimated by most CHCs. Nurses played little role in community based activities. Nursing services in CHS were dominated by injections and intravenous drips. This result is consistent with other studies. A Tianjing study reported that 84% of nursing services were injections and intravenous drips (Liu, L. H. et al., 2002e).

*They (the patients) think that the service manner of our doctors and nurses is very good. Furthermore, the staff working in our centre are quite experienced, especially for the nurses. They think that our staff are good in all aspects. Unlike in*

*the hospitals, where a lot of young staff were employed, they trust our staff more. Some patients even come to our centre after visiting hospitals for consulting or for intravenous drips. (director, hospital-sponsored CHC)*

*Compared to hospitals, patients are more likely to be treated by experienced staff, which gives the patients confidence, especially for nursing. (director, hospital-sponsored CHC)*

## **Hospital unloading**

Generally, hospital staff were reluctant to work in CHCs, especially for those working in large and well-performing hospitals. However, the over-supply of hospital staff was not uncommon, particularly in primary and secondary hospitals. Consequently, those who were poorly educated and had no patients or only had few patients were forced to work in CHCs. For instance, surgeons were usually not considered to be appropriate to serve as GPs, but in one CHC, more surgeons than internists were working in the hospital affiliated CHCs. One GP stated frankly: *“the staff whom the hospitals don’t need any more are often assigned to work in the CHCs”*. Sometimes, the people’s reluctance to work in CHCs led to increased staff turnover, which obstructed the continuity of care and in turn lost the trust of consumers. These results are consistent with the findings of studies conducted elsewhere (Guo, Q. and liang, 1999; Wei, J., 2000).

*Our doctors are assigned by our hospital. They can’t reject the assignment. However, they are reluctant in spirit, although they haven’t spoken out. (director, hospital-sponsored CHC)*

*We have more surgeons working in CHCs than internalists, because in our primary hospital, surgical activities face more pressures (no patients) [... ...]. I, myself, was a surgeon, although I graduated from the traditional Chinese medicine, I studied actually as a student of integrated Western and traditional Chinese medicine. Half of my internship in hospitals was spent in surgery. So, I could easily adapt to the activities in our hospital, a general primary hospital [... ...]. We had cooperated with the University Hospital (in surgery). I practised all, except brain surgery. (GP, hospital-sponsored CHC)*



*After a period of study and work in the CHCs, some doctors didn't feel good. They then changed. (GP, MCH-sponsored CHC)*

*We don't welcome new graduates from medical universities, they have no experiences and need some time to adapt to the new environment. However, the graduates with bachelor degrees don't want to work in CHCs either. The income level is too low to attract them. (GP, hospital-sponsored CHC)*

## **Conclusion**

The delivery and performance of CHS depend heavily on GPs. But the policy and attitudes towards GPs discourage doctors from working in CHCs. CHCs have become a means of hospitals unloading unwanted staff. The current CHS workforce is not well prepared to provide services that meet the local community needs. Multiple providers including both health and non-health practitioners working in both the public and private sectors need to be encouraged to be involved in CHS.

### **Lack of policy coherence across organisational incentives**

China has set up a clear national goal towards a primary care led health system, which is thought to be critical in producing better health outcomes (particularly if the alternative is to rely simply on a relatively unregulated market). This policy is consistent with the international trend (McMullen and Mitchell, 1999; Collins et al., 2000). However, there is a need to align all policies with this goal. In the following section, I examine the organisational incentives according to the WHO framework (WHO, 2001). Lack of policy coherence across the organisational incentives is obvious.

The WHO has identified five organisational incentives: autonomy, accountability, market exposure, financial responsibility (for losses and rights to profit) and unfunded mandates. "Service providers need flexibility, not for arbitrary purposes, but so that they can respond to well-defined incentives - that is, so the incentives defined by organizational and institutional arrangements can be effective instead of being frustrated by rigidities. [.....]. Countries that have introduced consistent objectives and that have aligned the five organizational incentives appear to have been more successful than countries that have ended up with conflicting objectives and incentives regimes." (WHO, 2001, pp. 64-5)

## The degree of autonomy

### Autonomy in input mix and levels

It is clear that the low educational standards of the CHS workforce was an obstacle to the development of CHS. It was widely believed that the lack of autonomy of CHCs in employing staff contributed at least partly to the low educational standards.

The recruitment of CHC staff was usually controlled by the parent hospitals. Generally, GP candidates were selected from the medical practitioners in internal medicine, gynecology/obstetrics and general paediatrics. They were required to have some work experiences in hospitals, but did not necessarily hold full medical degrees. There was no uniform requirement regarding the entry standards of GPs. Some managers preferred older and senior staff so that they could get the trust of the consumers as soon as possible, while others preferred younger staff with more flexibility in training and ability to adapt to the new environment. Most GPs were assigned by the parent hospitals rather than having volunteered.

*I'd like to choose young physicians to become GPs. The older physicians will retire soon. It's unnecessary to train them. Another requirement is that the physicians have to work hard. In terms of specialty, there is no need to limit. I can send the physicians to be trained in our general hospital to improve their knowledge and skills in any specialties. (director, enterprise-sponsored CHC)*

*As required by our hospital, the candidates for GP positions must have three year training certificate in medicine and at least several year working experiences. (GP, enterprise-sponsored CHC)*

*We first consider the professional title of any candidates for the position of GP, but more importantly, the candidate must be willing to do community work and should be qualified to do community work rather than merely to do clinical works. (president, district hospital)*

Only two out of the 14 CHCs without or with loose connections to hospitals in Chengdu recruited staff through an open process of inviting applicants. The CHC staff recruited from this approach were believed to be more enthusiastic to work in communities and more competent in delivering CHS. They were thought to be well

prepared to overcome the difficulties in changing roles and work patterns. One GP even believed that they could provide quality services equivalent to the outpatient clinics of secondary hospitals, because of the relative richness of the experiences of these staff.

*Our staff are recruited from the whole society. The basic requirements include clinical experiences, preferably in internal medicine, as well as good communication skills with residents. But, yes, we do have doctors in specialties other than internal medicine. I, as an example, had eight years experiences in bone surgery [... ...]. Good specialists are not always able to act as good GPs. They should have a concept transit first. (assistant director, independent CHC)*

*All of our staff were recruited when we set up the CHCs. The reasons that they applied for positions here are, firstly, they were interested in CHS, I think. Secondly, they felt that our national policy gave priority to community health. The government would definitely support the development of CHS. Therefore, they might have a good future development in personal career. (assistant director, hospital-sponsored CHC)*

*Our GPs like their work, although they felt it was difficult in the beginning [... ...]. Our nurses also feel better compared to their classmates (who work in hospitals). So they are actively involved in the CHS. One nurse in our centre even introduced one of her classmates to work here and encouraged her classmate to resign from the hospital where she worked. (assistant director, independent CHC)*

It may be that theoretically they were more likely to recruit qualified CHC staff through the open process of inviting applicants. However, the number of applicants was often too small to ensure the prerequisites were met. These usually included a certificate (or degree) of medicine, several years of work experiences in hospitals, and a certain level of professional seniority (titles or positions).

*I don't know exactly the selection criteria for GPs. But I think that it depends on the resources of the candidate. If we need 15 GPs, but have only 12 applicants, we would have not much choice. (GP, independent CHC)*

### Autonomy in financial arrangement

Most CHCs in Chengdu and Panzhihua were sponsored by hospitals. The majority of funding also came from hospitals. Hospital investments were usually used in providing buildings and facilities, paying salary and bonus of staff, and purchasing drugs and materials. Because the per capita funding from government that was supposed to cover population- or community-based activities could hardly compensate for the real costs, most of the expenditure had to be covered by the hospitals or the CHC themselves.

*Y CHC doesn't pay rent for the houses or for the cost of decorations. Their clients are also richer, with higher incomes. If we charge the same rate, few patients will come. We have two or three old residential communities. We can't charge too much. (president, district hospital)*

*We have to invest in houses to set up the CHCs. A 400 M<sup>2</sup> space is required for each CHC by the health authority. But the Jinjiang local government has no ability to afford the cost of space [... ...]. The budget of street administrative offices can just meet their employees' salaries. This is the poorest district in Chengdu, with a lot of retired people. Unlike the new residential areas, all the retirees remain in the old residential communities, like us. Jinjiang local government has to pay more than 20 million yuan for the retirees, how can they afford others. The new residential areas have no such burdens. (president, district hospital)*

*Our hospital invested several hundreds thousands yuan in establishing this CHC [... ...]. Last year the local health authority invested 100,000 yuan, this year, another 100,000 yuan, at least 100,000 yuan will come. (director, hospital-sponsored CHC)*

*We are managed by the MCH hospital. The buildings belong to the MCH hospital. Our salaries and bonuses, which are not related to our performance, come from the hospital. (GP, MCH-sponsored CHC)*

*All hospital funds are used for their purposes. There is no funding focusing on CHS available from the hospitals. The investment from the health authority can hardly meet the cost of our surveys and creating of health files [... ...]. I have reported to our hospital heads for several time and expected to get financial support. But I failed. (director, enterprise-sponsored CHC)*

There existed a consensus among the interviewees that CHCs were unable to make money or maintain their budgets in balance. Unlike the other departments of hospitals, the incomes of CHC staff were usually not dependent on the volume of clinical services and the relevant profits produced. Some hospitals promised to offer average incomes for the CHC staff against their hospital counterparts, similar to the policy for administrative staff. A national survey showed that in 69.8% of municipalities the CHC staff were salaried by their parent hospitals (Yang, H. et al., 1999b). Even in the most developed area of China (eg. Guangdong), only about 30% of CHCs were financially independent (Chen, S. X. et al., 2002a).

*Our salaries and bonuses are provided by our hospital. But since last year, the hospital hasn't supported us in other ways, except for the survey forms. We are expected to return the hospital's investment in drugs and equipment [... ...]. The hospital does not pay the labour costs of home visits and surveys. (director, enterprise-sponsored CHC)*

*Funding is a key issue. Our hospital has never invested in CHS<sup>103</sup>. I have reported our difficulties to the CEO several times. A new station will be set up soon down the hill. I need lots of equipment to cover the six components of CHS, including ECG, Ultrasound B, X-ray machine, dental equipment, and gyn/obs equipment, as well as rehabilitation facilities. There will be more patients visiting that station because of the better location. I also want to organise activities like Taichi and elderly exercises. I want to do lots of things, but I have nothing to support these activities. (director, enterprise-sponsored CHC)*

The incomes of CHS staff consist of two parts: salary and bonus. There is a nationally uniform policy with regard to the salary levels, depending on the regions, qualifications, professional titles, positions, and years of working experiences. The disparities in income depend mainly on level of the bonus. Some hospitals offered an “average bonus” or a fixed amount of bonus for their CHC staff. The amount of bonus varied considerably depending on the financial situation of hospitals. Usually, there was no upper limit. For example, 150 yuan bonus per month was guaranteed in one CHC, in

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<sup>103</sup> Salaries and bonus, as well as existed building and facilities, were subsidised by hospital.

another CHC, it was 40 yuan. Generally speaking, the bonus comprised about 20-30% of the total incomes. Although the bonuses offered to CHC staff were usually at or below the average level of hospital staff, these incomes were very stable, and it was perceived as unachievable by the CHCs alone.

*Our hospital invested in the basic equipment, not too much. It's around 2000 yuan. Our salaries come from the hospital, but we have no bonus at all. It is very difficult for our hospital to produce revenue. So we are different from others, where a good profit can be made. They can offer bonus to the CHC staff at average levels, no matter the CHCs contribute to the profit or not. Many institutions take this strategy. But we are a general hospital in a poor district. We can't afford the strategy. I don't know whether the health authorities invest in CHS or not, but I suspect not, or only little. There is policy but no money. (GP, hospital-sponsored CHC)*

Despite the careful financial arrangements, some CHC staff did not think that their remunerations matched their efforts and workloads. A few GPs complained about long working hours and the sacrifice of weekends and holidays. Even those with very few patient visits criticised the policies of taking revenues as the only criterion for judging GPs' contributions. They held a strong feeling of being treated unfairly, believing that their efforts in community activities were not rewarded, especially when compared with their hospital counterparts. As explained by one CHC manager, the low remunerations of CHC practitioners were directly related with the "performance of CHCs". Financial performance was a key determinant in allocating resources and distributing bonuses. But some interviewees argued that the low profits of CHS were directly associated with the low inputs. Distributing bonuses according to the profits generated by each department would certainly place CHCs and other poorly-equipped departments in a disadvantaged position.

*The doctors are reluctant to work here. It's hard work and they have to pay community visits every afternoon. (director, hospital-sponsored CHC)*

*The GPs in our centre are overloaded. None of them enjoys all of the public vacations stated by the labour law. We are making free contributions. But it can't last long, can it? It's a market society now; it's different from the 1950s and 1960s. How can you expect doctors to work in these conditions for long? You do not offer*

*high salary, nor other treatments. But you should at least provide some immaterial compensation, such as praise and appreciation, or give them more salaried vacations. Now we have only 51 days such vacation, we deserve more. We have to work half day on Saturdays and on public holidays. (GP, independent CHC)*

*In one of our CHCs, we have only two doctors. They have no vacation at all. They work everyday, including the weekends. The hospital can't spare more doctors for us. We have been running in this condition for one year. I feel so sorry for them. Without extra bonus, I invited them for dinner, paid by myself [... ...]. In that centre, I have to ignore the communities, because of the high workload in outpatient clinics. An average of 100 patients visit that centre each day, with ten needing intravenous drips. I can't ask the doctors to visit the communities. The nurses can't work without doctors. They have no right of prescription. Who can take the responsibility if an accident happens? (director, hospital-sponsored CHC)*

*Theoretically, our doctors and nurses who have participated in the training classes recognise the crisis facing the hospitals and the urgent need for CHS development. However, they have to consider their individual situation. How much can I be rewarded with so much contribution to CHS? [... ...] They should get incomes equivalent to those of the hospital staff if they make similar contributions. But actually, the CHC staff work much harder than the hospital staff with much lower incomes. This is unfair. Yes, we do not make much money, because we are not well equipped. In the hospital, you can offer all sorts of examinations and tests, including MRI, CT, ultrasound B, and X-ray, as well as blood test and isotope etc. But here, we can only test for three items in blood. We have only ECG and we can only provide very simple services such as measuring blood pressure. (director, hospital-sponsored CHC)*

*The hospital calculates the profit we make. However, they don't calculate it item by item because we have no computer system to manage this, so the financial staff can not do the detailed calculation for you. Therefore, we are assumed to produce 15% of profits from selling drugs. But actually, the profit from selling drugs differs considerably, from several percent as penicillin to 20% or 30% [... ...], and the costs include rents, gas and electricity, salary, bonus, transport, and administrative [... ...]. If I were independent, I would promise a good financial*

*revenue, even if I increased by 20% the salaries of our staff. (director, hospital-sponsored CHC)*

While hospitals paid the salaries and bonuses of the CHC staff, all financial revenues generated by CHCs had to be submitted to the parent hospitals. Similarly, the governmental investments also went to the parent hospitals rather than the CHCs. Sometimes, these funding were intercepted by the parent hospitals without going to the CHCs. In this sense, one manager argued that CHCs were better operated independently from hospitals. Nationally, 34.9% of municipalities let the CHCs run their own finances. Some researchers argued that this arrangement was similar to privatisation (Yang, H. et al., 1999b; Liu, D. P. et al., 2002b).

*The health authority invested a little. Because we are staff of Panzhihua Steel Company and our salaries and bonus are provided by the company, we have to serve the company staff without extra charges, including the home visits. We have not calculated the costs of our services at all. You couldn't calculate this cost. You should have paid the staff to deliver home visits. But you couldn't because they have already been paid by the company. There is no difference of whether you work in the office or in the community. (director, enterprise-sponsored CHC)*

*We haven't got one cent from the local health authority. They require us to carry out CHS without any investment. We have to motivate all staff in creating family files. Now we have completed all health files for future use. But our staff are not so happy to be involved in this work, because they have to do it during their off time. (director, enterprise-sponsored CHC)*

*I think that it is better to operate CHCs independently from hospitals. If the CHCs are attached to the hospitals, they become outpatient departments of the hospitals under the existing hospital model [.....]. We are concerned about the continuing development of the CHC. If we were attached to the district hospital, our activities would be limited and became a dependent department. Honestly, as doctors working in outpatient department, we would not be as busy as now. (assistant director, independent CHC)*

Although most hospital-attached CHCs had no autonomy in financial management, many managers expressed concerns about the coming financial responsibilities. A few hospitals were planning to introduce an “objective responsibility” mechanism to ensure



value for money. The “objective responsibility” was expected to improve the work efficiency of CHCs, but could result in further bias towards clinical service delivery. As argued by some managers from the financially independent CHCs, the fee-for-service system and distorted pricing policies had encouraged the CHCs to concentrate on more profitable services, such as pharmacies and clinical services.

*The project managers instruct us to shift our focus from the clinical component to others. However, it's very difficult in practice. We must always consider our survival first. There are lots of good services. But if we lose money in these businesses, who wants to do that? (GP, independent CHC)*

*Why does our CHC look like a big pharmacy? Because we have to support our employees and achieve sustainable development. According to the regulation, we are not allowed to run such a big pharmacy. We can only keep some prescription drugs. But the list of approved brands of prescription drugs which we are allowed to carry is too limited. We have no other ways to support our employees without selling more drugs, which can definitely produce profits. (assistant director, hospital-sponsored CHC)*

*We can make 800,000 yuan profit per year, which comprised the biggest part of financial support to our centre. (assistant director, independent CHC)*

*The hospital paid half of our training expenses last year and the year before last year. But this year, not a penny was given to us. We had to pay every cost by ourselves, including 1000 yuan decoration cost of the houses. (director, enterprise-sponsored CHC)*

*Now having come to the CHC, we intend to do a good job. Our hospital is now making objective responsibilities for us. (director, hospital-sponsored CHC)*

*It's very difficult to increase the contracts with residents. The centre should adjust the incentive mechanisms. Everybody knows where to put their effort just by looking at the rules for the distribution of bonus. Given that the bonus payments are dependent on clinical services, who will put much effort in making contracts? The new year is coming, we should reconstruct the mechanism. (GP, independent CHC)*

*We invest more than 100,000 yuan in buildings. If it is counted into the cost of CHS, we would definitely be losing money. The government must give support to*

*CHS. If we are required to earn our salaries and bonus, we will certainly develop specialised medical services, and ignore others, such as rehabilitation, health education, and so on. The government must support CHS. If you don't support CHS, the staff will be forced to make money from specialised medical services. (GP, enterprise-sponsored CHC)*

#### Autonomy in outputs and scope of activities

The scope of CHS activities were strictly controlled by the health authorities to avoid the likelihood of CHCs becoming new hospitals. But many CHC managers had not understood the aims and objectives of what they were requested to do. The heavy dependence on official policies and administrative instructions and lack of financial supports led to a passive and defensive pattern of working and eventually resulted in poor outcomes (see more details in Chapter Five).

*Our main difficulty is that the policy is still lying on the papers. In other words, we are not given detailed instructions on how to implement CHS. As a tradition, we always wait for further instructions from the government. Sometimes, we will be criticised if we intend to explore new approaches. (director, enterprise-sponsored CHC)*

*We have no clinics in residential committees. All the services are delivered to homes directly. The health authorities don't recognise the affiliated stations. So the health authority has some problems. Despite encouraging us to develop networks, they don't recognise affiliated stations. The current medical market is indeed in disorder. (president, district hospital)*

The CHC directors were supposed to arrange daily activities and coordinate with other stakeholders. As mentioned earlier, the CHCs had no autonomy in workforce and financial arrangements unless they were independent from hospitals. But they had to follow instructions and supervisions from various government departments, their parent hospitals, attached companies, and public health agencies. Many CHC directors felt powerless and bewildered, especially in the face of contradictions between different sets of instructions.

*It's not good because of the lack of the power to make decisions. (GP, enterprise-sponsored CHC)*

*I envy YL CHC. They can decide by themselves [.....]. If I had the power of making decisions, I would possibly do better. (director, hospital-sponsored CHC)*

*We cover a big area, with a big population. But we have only limited staff. Furthermore, we have too many supervisors, including hospital, company health division, and the health authority. Some tell us to do this way, some tell us to do that way. It's really not easy to be coordinated. It's better now, the hospital gives us some autonomy in decision making, possibly due to the coordination between health authority and the steel company. (director, enterprise-sponsored CHC)*

*We are not independent from the hospital. We are required by both the district health authority and the company general hospital to carry out CHS, however, the general hospital ordered us to wait until they make the final decision when the district health authority gave some instructions. You know, we are part of the hospital, we have to follow hospital's order, because all the staff, salaries, equipment are given by the hospital [.....]. We are still operating under the old mechanism. (director, enterprise-sponsored CHC)*

Some interviewees believed that the lack of autonomy in deciding outputs and scope of services largely restricted their capabilities in responding to people's needs. For example, one CHC transformed from a MCH station was not allowed to perform abortion surgery, while many consumers requested such services because of the reputation of the former institutions.

*Family planning is one of the responsibilities of our outpatient services, including physical examination (in diagnosing pregnancy) for the employees who have no permanent resident certificates in our city, and abortion, as well as providing contraceptives. We are now not allowed to do abortion but before, you know, this was a MCH station, Clients came for this purpose, how can we refuse to serve them now? We are only allowed to distribute contraceptives and printed education materials. The health authority and the District Hospital opposed us to perform abortion. They are worried about the market. But we are so far away from the District Hospital, even if we did not provide this services, we could still not make sure the patients would go there. (assistant director, independent CHC)*

### Autonomy in clinical administrations

Given the hospital sponsorship of CHS, the clinical administration of CHS is virtually controlled by hospitals. For example, hospital-at-home services were not allowed to be provided by some CHCs because of the potential medical risks and possibilities of provider-consumer disputes. Some interviewees attributed these disputes to the lost of defensive protections such as laboratory tests, equipment, drugs, and advice from senior hospital specialists. One manager criticised the role of hospitals in CHS, with a view that the CHCs would become duplicated hospitals.

*I'd prefer to be independent from hospitals. If affiliated to hospitals, the CHCs would possibly become an outpatient department of hospital. But, of course, it depends on the way management from the hospitals is exercised. We were worrying about the future development of the centre if we were part of the District Hospital. Although it would be much easier as a doctor in outpatient clinics. (GP, independent CHC)*

*I don't feel it is too difficult to manage without the supervision of a hospital. Actually, it's better to be independent, without so many supervisors. For example, the hospital would not allow you to provide hospital-at-home services. But for the elderly people with pulmonary infection, when the weather was too cold, it is necessary to give intravenous drips at home and have a monitoring of the conditions. The patients might be recovered in 2-3 days or 3-4 days. Then the home bed could be cancelled. It's unnecessary to refer the patient to hospitals. Or else, both the patients and the rest of their families would feel difficult. The costs would also be quite high. (assistant director, independent CHC)*

*We organise our activities by ourselves without too much intervention from our hospital. We are encouraged to provide as much services as we can provided that we could avoid the risk of medical accidents. Medical dispute is quite common now. We can often hear of legal cases between patients and health providers. We dare not carry out some activities at patients' homes that may lead to accidents such as intravenous drips at homes. (GP, hospital-sponsored CHC)*

The CHC staff were generally full-time and tightly managed. As in other sectors the work of CHC practitioners is controlled and regulated by government through a

well-organised institutional hierarchy. These kinds of institutional arrangement are an important focus of government policy. Through this system CHC staff could be instructed to participate in various activities whether or not they were relevant to their work or could be prohibited from being involved in other services despite maintaining their clinical autonomy. For example, some labour-intensive activities such as the baseline surveys were designed and required by the health authorities, representing a standard institutional approach rather than being steered by an individual professional who was accountable for the longer term outcomes towards which such activities were notionally directed.

*Patients can select any doctors to make contract. However, the community service office will coordinate all the community works. For example, we are now all involved in the baseline survey and establishment of health files for residents and their families. It's an additional work beyond our staff's ordinary roles. All staff are involved in. (director, enterprise-sponsored CHC)*

#### Autonomy in strategic management

Since most CHS programs were virtually controlled by hospitals, a strategic plan that integrated the CHS into the entire framework of hospital development was important to encourage appropriate resource allocations and coordination between hospital services and CHC services. A clear vision of the future relationship between the CHCs and their parent hospitals was an essential element underpinning the strategies in developing CHS. Many interviewees expressed concern about the separation of CHCs from their parent hospitals, while only a few of them thought that the entire hospitals could be transformed into CHCs. These different views determined the different futures of CHCs.

*In the future, if we are independent from our hospital, I can't guarantee our staff incomes equivalent to the hospital staff any more. (director, hospital-sponsored CHC)*

*I feel very hard to manage the CHC. Why? My knowledge and skill is limited, and I don't know where the CHS should go in the future. We have no plan for the future development. (director, hospital-sponsored CHC)*

Although the establishment of CHS involved a high level of government interventions, some important infrastructure elements that might need strategic thinking beyond simply establishing the CHS organisations have not been fully considered. For example, a strong information system is needed to manage, analyse, and use the large amount of health records for community residents (Shi, Y.X. and Pang, 1999). Many interviewees held very high expectations of electronic information systems, believing that a computer system could facilitate the efficient use of information. But the results were quite disappointing. In a CHC where electronic medical records had been used, the computers were mainly used to produce electronic prescriptions. No population based statistical data were produced to map out the strategy of the community practice. Furthermore, without unified standards, the data collected from different organisations were very difficult to be amalgamated to provide supports for regional health planning and scientific research.

*According to the requirements of the project, we have to use the computer to manage our activities. The project invested more than 200,000 yuan in installing the computer system. We did not understand the purpose at the beginning. But now, we can't work without the computer. It's much easier to manage our activities. Besides the office software, we also installed software designed specifically for family physicians, including paging, pharmaceutical information, making appointments, children's care, immunisation, and so on. All the patient's information has to be inputted into the computer system [... ...]. We have to record all the details about the patient, even if only one tablet of drug or a piece of bandage is used by the patient<sup>104</sup> [... ...]. All of our doctors were provided with two days training after the installation of software. We were required to use electronic records and electronic prescriptions. All paper work was abandoned six months later. (assistant director, independent CHC)*

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<sup>104</sup> Episode information of non-contract patients was kept in electronic format, but was not pooled into one exclusive file.

### Degree of accountability

Despite the great efforts of health authorities in steering CHS development through the hierarchies, the lack of budgetary capacity of governments made the reliance on hospitals unavoidable. As decision rights were delegated to hospitals, the health authorities virtually lost the ability to control the direction of CHS development administratively. With increased autonomy within a fee-for-service system, it was unimaginable to expect hospital to abandon following the money and to reorient towards addressing community needs. Neither governments nor consumers were capable of steering the decision making process.

However, the centralised political structures have still secured national protocols for CHS. Although many hospitals were not enthusiastic about CHS due to the lack of direct financial benefit, they found that this was a chance to advertise themselves. Market penetration was identified as the top strategy in hospital sponsored CHS. Many interviewees believed that consumers would have been attracted by other health institutions and patients would not be referred to their hospitals if they were not involved in CHS. This result was also confirmed by other researchers (Wang, X. H., Fan and Feng, 1999; Xu, X. J., 1999). CHS eventually became an instrument of hospitals seeking to increase market share. Given the governmental supports, advertising through CHS cost even less than other marketing strategies.

*Even if other hospitals don't set up CHCs, we will still possibly provide CHS from the perspective of the market economy. (director, hospital-sponsored CHC)*

*It is an issue of occupying territories. (director, enterprise-sponsored CHC)*

*Our hospital set up the CHCs as a way to occupy the market [... ...]. Even if the CHCs have deficit spending, it can be considered as an investment in advertising. And more importantly, we have occupied the market. (director, hospital-sponsored CHC)*

The contradictions between hospital sponsorship and governmental control finally resulted in hospitals complying with the requirements of the health authorities although not necessarily in accordance with the original purpose of those requirements. Because the “quality” of the CHS programs was generally evaluated according to whether the CHCs had conducted required services and what percent of the target populations had

been covered, the CHCs adopted various strategies to complete the quantitative quotas. Services were established, not necessarily targeting the populations in need and leading to unnecessary work loads for CHC staff and a waste of resources. For example, to increase the volume of HCAs, some CHCs offered free contracts; some shifted the contract fee to the insurance schemes (usually the insurance schemes did not reimburse the contract fee); some encouraged the CHC staff to persuade their family members, relatives, and friends to sign the contracts.

*We offer free contract, or charge 40, 60, or 80 if the charges can be reimbursed. We can offer a receipt in the name of treatment fee. We have to complete the task assigned by the health authority. (director, hospital-sponsored CHC)*

*Now, we have to persuade clients to make contracts with us in order to reach the goal of 100 contracts. (GP, independent CHC)*

*We encourage our staff to persuade their friends and relatives to make contracts with us. After some time, some residents come to ask for signing contracts gradually. (director, enterprise-sponsored CHC)*

### **Degree of market exposure**

*It is less successful in health, for all the reasons that markets work more poorly for health care. However, attempts to offset market failings by integrating such dispersed activities into a hierarchical bureaucratic structure have almost always run into problems of staff motivation and accountability. Close supervision is difficult to implement, while excessive control is detrimental. (WHO, 2001, p. 63)*

### **Market participation in out-of-pocket financing**

China's health industry is characterised by intensive competitions between health institutions, both at the same level and across different levels. The government intended that competition would promote the efficiency and productivity of the CHS (MOH et al., 1999; MOH et al., 2002), but unintentionally ignored the specific public goods nature of CHS (Hao et al., 1999). The risk is that competition forces agencies to follow the money rather than community needs, deviating from the ultimate goal of CHS (WHO, 2001). It



was not conducive to achieving the cardinal features of primary care (Starfield et al., 1998; Wholey et al., 1998).

*There exists competition. Even the big hospitals want to occupy the communities. They also provide home services. So, we have to try to find something special to survive. That's not easy. (GP, hospital-sponsored CHC)*

*I have discussed the social insurance problems with Director L (from the health authority). Currently, according to the policy of social health insurance, some medical costs should be covered by the individual account, some by the social pooling account. Many patients are trying to enter into the social pooling account to save their individual account. The individual account should cover primary care provided by the CHCs, but the patients go to big hospitals, which can also be covered by the individual account [... ...]. The big hospitals place their priorities in financial revenue. They don't care about whether the patients should be treated by the CHCs or should be referred to CHCs if they can make money [... ...]. I argued that if the situation goes on, patients will not visit CHCs, and medical expenditure will not be controlled. (director, enterprise-sponsored CHC)*

Since no government could afford all possibilities offered by medical sciences, priority setting is essential as part of health service planning. This requires, if possible, a consensus of all stakeholders and collective efforts towards a universal goal (Macara, 1994). Under the competitive environment, the geographic catchments assigned to each CHC became meaningless in harmonising the resources. Tertiary hospitals, CHCs, private clinics, community pharmacies, and even public health agencies compete against each other in the same communities and on an unequal basis. Coordination is virtually nonexistent. The fee-for-service mechanism plus an intensively competitive environment and a situation of over-supply of resources provides strong financial disincentives for referring activities. Since the income of each staff or department was associated with the volume of services, referring patients to others meant a loss of revenue. Overseas research also suggests that the referral rate tends to be lower in fee-for-service systems (Starfield, 1994a). Obviously, the above issues further weakened the attractiveness of CHS to consumers.

### Market participation: beyond out-of-pocket financing

The WHO World Health Report 2000 offers an analysis of the scope and limitations for the use of competitive mechanisms in health agency funding in order to promote efficiency. The Report emphasises that the use of such mechanisms does not depend upon individual fee for service practice (WHO, 2001, p. 65). It argues for the effectiveness of the competitive dynamic when agencies compete for enrollees in pre-paid schemes and also when agencies tender competitively for long term contracts for program delivery.

In the current CHS programs, there was no competition beyond that for out of pocket fees. There was no competition for prepaid enrolment nor was there any competition in the determination of program funding. The national policy guidelines (MOH et al., 1999) state that local health authorities shall provide funding for population based preventive services, information systems, renewal of equipment, training expenditures, salary of retired staff and medical insurances for CHC staff. Such funding was generally transferred directly to the parent hospitals or CHCs without any mechanism to ensure the appropriate use of this money. Some were even intercepted by the parent hospitals and not used in CHS.

As described earlier (in Chapter Five), funding for public health programs was usually monopolised by the PHIs. When the PHIs faced pressures to generate incomes (Liu, X. and Mills, 2002), the conflict of interests between CHCs (or hospitals) and PHIs was obvious. Generally the less profitable tasks were more likely to be assigned to the CHCs.

*The EPS do the immunisation by themselves. There is an EPS nearby, with two staff in charge of immunisation and collecting reports, such as communicable disease cases, from us. We do not do immunisation, however, we report monthly and yearly to the EPS, including the cover rate of immunisation [....]. We are from two independent systems. In our company, there existed a health department to manage EPS and MCH stations. They don't have authority to manage hospitals. (director, enterprise-sponsored CHC)*

*We are not allowed to practise some activities in preventive care, because these activities can generate revenues. If we do those, how can EPS and MCH*

*stations survive? They won't give up their powers in this field. We can't get the money in preventive care, never. (director, hospital-sponsored CHC)*

*The MCH activities are the business of DDK. We are not authorised to undertake these practices. We do want to cover these components as part of the CHS, such as preventive physical examinations for (primary) students. But they don't give us permission. (director, enterprise-sponsored CHC)*

*Silicosis is a big problem in our community [.....]. But we are not allowed to run relevant programs. It's the responsibility of the Occupational Health Institute. The institute also has a hospital to treat patients with silicosis. (director, enterprise-sponsored CHC)*

### **Degree of unfunded mandate**

As the survival of CHS is increasingly shaped by market conditions there exists a risk of underservices for the poor. The WHO has suggested that public funds should be spent in favour of the poor so that the better-off subsidise the less well-off (WHO, 2001). The current financing arrangement, hospital sponsorships, and increased market dependence clearly impedes the achievement of the above goal. As CHCs and hospitals face great pressures from the government to deliver unfunded services, the phenomena of medicine subsidising prevention and pharmacy subsidising clinical services is being intensified.

*The poorer one person is, the more reluctant is the person to attend health institutions. (director, hospital-sponsored CHC)*

*We are located in the poor district in Chengdu. It's more difficulty for us to make contracts with residents since we increased our price from five yuan to 20 yuan. Many residents said that they could only accept five yuan contract, 20 yuan was too expensive for them. It may be easier if they received better education. (director, hospital-sponsored CHC)*

### **Conclusion**

While hospitals enjoy considerable autonomy, the hospital sponsored CHS remain rigidly controlled by their parent hospitals. There are strong pressures on the hospitals to

use their CHS programs as a marketing tool while they concentrate their investments on profitable clinical services. This is partly because of the strong market competition for individual out-of-pocket expenditure and partly because, while the hospitals do have an obligation to provide services to the poor they are generally not accountable for the degree to which they meet this obligation. The hierarchical controls on CHS have led to expanding capacity and adding services rather than reorienting priorities or promoting allocative efficiency. Since the CHS programs are seen as low margin programs, both the inputs and outputs of CHS are generally poor.

### **Lack of consumers' support**

Many interviewees identified the lack of consumer support as an obstacle in developing CHS. They complained about the misunderstandings of consumers and the financial barriers. Some interviewees hoped that consumers would use them as first point of contact. But in reality, it seems unlikely.

*We are not well adapted to the role of GPs. We all know what a GP means in the ambulatory services, but the patients don't understand. They don't know what a GP is. When they are sick, they would like to visit the doctors they like, rather than let the GPs have a check, for example measuring blood pressures for patients with hypertension or coronary heart diseases. We want to manage these patients. Our doctors on duty also told them many times and asked them to visit our GPs who are in charge of the management of their files. But they refused to follow the instructions. They insisted on visiting the doctors with whom they are familiar [... ...]. The main difficulty is caused by the lack of propaganda. When we visited the residents to create health files people would say "What's that? We were not informed by our company". I said that there was propaganda in the whole city, but they just didn't understand. Sometimes, if we talked for a while, they might possibly accept it. So, we haven't given enough propaganda. (GP, enterprise-sponsored CHC)*

*We wanted to enter into the communities, but were not allowed by the residents. They instructed us to stay outside their residential area. They did not understand us. (director, hospital-sponsored CHC)*

*The doctors feel better now in communities. At the beginning of my career in CHS last year, I asked for comments from the head of each group at the weekly meeting. They all complained about the difficulties of working in communities. We came to the communities to serve the residents, but the residents didn't accept us. Sometimes, they even refused our entering into their houses. Now, things are better. After frequent contacts, the patients and the residents began to understand us. Yes, it's better. (director, enterprise-sponsored CHC)*

### **Poor privilege of community health services**

Not all community residents knew the CHCs in their communities. As said by the interviewees, it depended on the marketing strategies of each CHC or its parent hospital. The baseline survey was the most important marketing approach adopted by many CHCs. Basically, the existence of CHCs might have been noticed by more than 50% of the community residents, but one interviewee estimated as low as 2-3% of residents knowing her CHC. This is consistent with the finding of another survey of hospital outpatient visitors, which revealed that about 40% of patients had never heard about CHS (Ying et al., 2001). Usually, the elderly people paid more attention to CHS than others.

*When I first entered the community (in 1999), some residents thought that we came to provide house cleaning services<sup>105</sup>. They did not know what community health meant until I explained details to them (GP, MCH-sponsored CHC)*

*Before the establishment of health files of our residents, less than half of the residents knew us. Now, among the residents who have health files in our centre, 70%, possibly 80% know us. (GP, enterprise-sponsored CHC)*

*The elderly generally know about the CHCs. The young people don't care about the services, because they are rarely ill. (GP, MCH-sponsored CHC)*

*People are quite impressed by this CHC. They know we are supervised by the 5<sup>th</sup> hospital [...]. The patients, almost all, at least most of the patients, know that*

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<sup>105</sup> In Chinese "community health" is called "she qu wei sheng", and "wei sheng" can be interpreted

*this is a CHC of the 5<sup>th</sup> hospital. They are familiar with the staff, especially the senior staff. (director, hospital-sponsored CHC)*

### Consumers' attitudes towards the development of CHS

Most interviewees believed that consumers could get some benefits from the CHS programs, particularly in “*solving the difficulties of access to health care*”. But consumers might be more concerned about the benefits they had not got previously. The benefits identified by the CHS providers were not necessarily recognised by consumers. A survey showed that 20% of consumers believed that CHS were a strategy for the survival of medical institutions (Wei, J., 2000). In fact, there also existed doubts among the provider organisations with regard to the strategic objectives of CHS. Some assumed CHS to be a strategy of survival for the primary and secondary hospitals in the face of intensely competitive markets (based on my personal observation of a workshop in Chengdu sponsored by the MOH, 2001).

In general, consumers did not hold high expectations for CHS. Only 45% of consumers believed that it was necessary to develop CHS, whereas, 10% thought it unnecessary. Similarly, about half of consumers (45.7%-58.2%) expressed indifference to the fixed six programs formula of the government regarding the kinds of services to be provided by community health institutions. The exceptions were in regard to diagnostic services for common illness and prescriptions, where more than 65% of consumers thought that it was appropriate for community health institutions to provide such services. The attitudes of the survey respondents towards CHS varied among those living in different communities, with different educational levels, and employment situations. When compared with the community without CHC, more respondents living in the community with an independent CHC, which was rated good in performance by the health authority, expressed their recognitions of the necessity of developing CHS. However, in another community with hospital sponsored satellite CHC, fewer respondents thought CHS necessary. This result indicated that well-performed CHS could possibly reduce the negative attitudes of consumers towards CHS, but the establishment of CHCs did not necessarily improve people's acceptance of them.

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either as a health science term or as “cleaning”.

Meanwhile, people with secondary and tertiary education were more likely to recognise the value of CHS. Governmental employees gave more resolute and decisive answers than others. Only about 25% of governmental employees expressed ambiguous attitudes to CHS while as high as 45% of other populations expressed uncertainties regarding the necessity of developing CHS (Table 6-1).

Characteristics of respondents	Category	Necessary to develop CHS				Unnecessary to develop CHS			
		%	$\beta$ Coefficient	Odds Ratio	<i>p</i>	%	$\beta$ Coefficient	Odds Ratio	<i>p</i>
<b>Community***</b>	With independent CHC	55.7	.63	1.87	.009	2.8	-1.53	.22	.016
	Without CHC	51.1	.68	1.97	.002	13.7	.78	2.17	.015
	Other	35.9	—	1.00	—	13.4	—	1.00	—
<b>Employment*</b>	State-owned enterprises	38.0	-.18	.83	.423	14.1	.47	1.60	.164
	Governmental agency	55.3	.80	2.24	.044	19.1	1.95	7.04	.000
	Other enterprises	49.0	.05	1.05	.839	8.3	-.19	.82	.624
	No employer	42.7	—	1.00	—	10.6	—	1.00	—
<b>Education*</b>	Secondary	48.0	.21	1.24	.291	9.2	-.88	.42	.004
	Tertiary	50.0	-.04	.96	.904	4.3	-2.22	.11	.006
	Primary and less	37.1	—	1.00	—	16.7	—	1.00	—

**Table 6-1. Respondent characteristics associated with the attitudes of respondents towards community health services (result of multinomial logistic regression, n=594)**

Chi-square analyses were performed first to determine which respondent characteristics were associated with differences in the attitudes of the respondents towards CHS (\*  $p < 0.05$ ; \*\*\*  $p < 0.001$ ). Only those respondent characteristics that showed significant associations with attitude differences were included in the regression analysis (thus age, sex, occupation, the presence of a chronic condition, marital status, insurance, income, family type and the experience of seeking medical help from doctors in the past six months were all omitted at this point). The group of respondents who reported “don’t care” is the comparison group for the multinomial regression analysis. The overall predictive model was statistically significant (model  $\chi^2 = 61.62$ ,  $p < 0.001$ ).

Some of the results went beyond my expectations. The elderly and unemployed people who were supposed to be the main target populations of CHS did not hold higher expectations to CHS. Sheng and coworkers (1999) also found that 35% of elderly people were reluctant to visit CHCs, most thought it unnecessary. Other important factors such as income levels, insurances, and health status were not found significantly correlated to respondents’ attitudes. This might reflect the general low acceptance by consumers of CHS. In another survey among hospital outpatients we found that only 11% of patients visiting the outpatient clinics were willing to contemplate attending CHCs. In our survey of community residents we found that whether older people had chronic illnesses or

limited functioning in their activities of daily life made no difference to their willingness to contemplate using CHS (Ying et al., 2001; Sun et al., 2002). As explained by many of my interviewees, the establishment of CHS were often perceived as being primarily a political project. At the current stage, people had not seen real benefits from these CHS programs.

*Consumers were unlikely to take community health centres as first contacts*

My questionnaire survey revealed that most consumers were unlikely to attend CHCs (or GPs) as their first contacts in case of illness. The percentage of respondents who did not support a “gatekeeper” role for CHCs (31%) exceeded those who accepted it (20%), although nearly half of the respondents were uncertain in answering this question<sup>106</sup>. Obviously, the existence of primary care providers in communities without financial incentives could not prevent consumers from bypassing those community providers and attending the tertiary hospitals (Collins et al., 2000). Consumers would like to seek medical help that they thought to be of higher quality even if it was more expensive and less convenient, leaving primary care facilities underutilised (Chao and Wang, 1999; Dong, Y., 2001b).

I used the Chi square tests and multinomial logistic regressions to examine the relationships between people’s willingness of attend CHCs as first points of contact in case of illness and the demographic details (age, sex, marital statue, family type), socioeconomic position (community, employment, occupation, income, insurance, and education) and health status variables. The results showed that social and financial status were main factors associated with different perceptions (Table 6-2).

The insured consumers were more likely to reject the “gatekeeper” mechanism, which may have reflected unpleasant experiences of restricted freedoms in choosing providers under past insurance schemes, especially for those who were bound to providers whom they believed to be of low quality. This assumption was supported by the relationship between occupation and acceptance of a first contact arrangement,

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<sup>106</sup> The question on which this result was based asked: “When you encounter health problems, would you like to seek medical advice from the community health institution before you take further steps?” , There were three alternative answers “yes”, “not sure”, no”.



which showed that rural migrants and workers working in non-state-owned enterprises, most of whom were uninsured, were less likely to reject the “gatekeeper” roles of CHCs. However, the governmental employee was an exception. They seemed to be confident about getting desired services even if the “gatekeeper” mechanism was introduced. They might also have had better understandings of the underlying governmental policy.

Consumers require more freedoms in choosing care providers, not only because they want high quality services, but also because they need to be able to select cheaper providers in the hope of cutting down their medical expenses. This might be the reason why people with low-income levels were more likely to decline the “gatekeeper” roles of CHCs.

Characteristics of respondents	Category	Willingness to use CHCs for first contact				Reluctance to use CHC for first contact			
		%	$\beta$ Coefficient t	Odds Ratio	p	%	$\beta$ Coefficient	Odds Ratio	p
<b>Community***</b>	With independent CHC	19.8	0.09	1.10	.778	25.5	-.75	.47	.008
	Without CHC	28.6	.32	1.38	.225	18.7	-.73	.48	.004
	Other	14.4	—	1.00	—	40.8	—	1.00	—
<b>Insurance*</b>	Uninsured	20.0	0.05	1.05	.870	28.0	-.66	.52	.016
	Insured	19.0	—	1.00	—	39.1	—	1.00	—
<b>Income***</b>	High income	25.5	.17	1.19	.509	26.7	.25	1.28	.339
	Low income	9.9	-.17	.84	.644	49.3	1.03	2.79	.000
	Medium income	19.5	—	1.00	—	24.4	—	1.00	—
<b>Occupation***</b>	Retired	16.4	.53	1.70	.399	45.2	0.01	1.01	.984
	Unemployed	12.8	.26	1.29	.713	44.7	.24	1.27	.598
	Worker	22.3	-0.03	.97	.960	23.7	-.58	.56	.221
	Rural immigrant	18.5	.10	1.11	.855	21.0	-.74	.48	.062
	Manager/cadre	31.5	.29	1.33	.651	20.7	-.67	.51	.193
	Student	6.4	—	1.00	—	46.8	—	1.00	—
<b>Employment***</b>	State-owned enterprise	16.6	.43	1.53	.330	39.3	.16	1.18	.652
	Governmental agency	31.9	1.14	3.12	.025	29.8	.16	1.18	.738
	Other enterprises	31.8	.80	2.23	.040	13.4	-.58	.56	.140
	No employer	11.0	—	1.00	—	38.3	—	1.00	—
<b>Age**</b>	60 and over	14.1	-.26	.77	.418	40.7	0.01	1.01	.960
	Others	22.5	—	1.00	—	26.6	—	1.00	—

**Table 6-2. Respondent characteristics associated with the willingness of consumers to use CHCs as their first point of contact (result of multinomial logistic regressions, n=594)**

Chi-square analyses were performed first to determine which respondent characteristics were associated with differences in the attitudes of the respondents towards CHS (\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ ). Only those respondent characteristics that showed significant associations with attitude differences were included in the regression analysis (thus sex, the presence of a chronic condition, marital status, family type and educational level were all omitted at this point). The group of respondents who reported “not sure” is the comparison group for the multinomial regression analysis. The overall predictive model was statistically significant (model  $\chi^2 = 118.59$ ,  $p < 0.001$ ).

The low utilisation rates of CHCs and the lack of recognition by consumers were often attributed by the interviewees to people's willingness to attend hospitals as their preferred choice of providers. Many interviewees believed that consumers associate hospitals with high quality services because of the better educational backgrounds of hospital staff and the fine equipment. However, there is a strong cultural tradition for consumers to seek medical help in their own communities in China. Solo practice by traditional Chinese medical practitioners was the prevalent pattern before the integration of western medicines into their practices. Admission to hospitals was usually a last

resort for many people, especially for the elderly people. Unfortunately, this orientation to help-seeking locally was not as strong as previously; it appears that many residents feel that what is being offered through CHS programs is often inappropriate to their needs.

*The elderly patients are not willing to be admitted to hospitals. They have been used to this concept. You can see the cases everywhere, even in the departments of big hospitals. At the early stage of illness, the patients may feel difficulty in breathing or have a cough. When the symptoms are aggravated, they would prefer to take some medicine by themselves. They would not visit clinics unless it was uncontrollable. If injections or intravenous drips couldn't control the symptoms, we would have to refer them to hospitals. (GP, independent CHC)*

#### Reason for attending community health centres

Of the 594 self-respondents to the questionnaires, 533 answered the question “What are the most important possible factors that might encourage you to see doctors in the community health centres?”. Although the answers given by the residents of the three communities were slightly different, the general patterns of response were almost identical, with geographic distance and finance as the dominant concerns (more than 40%) when considering choosing CHCs, followed by concerns about instant access and service manner. Less attention was paid to privacy, continuity of care, and insurance reimbursement. Another important reason for considering choosing CHCs was a lesser degree of severity of illness, which was an answer coming directly from the respondents rather than having been designed into the questionnaire beforehand. More recognition of this reason might be expected if it had been included as one of the alternative answers in the questionnaire design (Table 6-3).

Reason for attending CHC	Recognition rate (%) among residents in community			
	with hospital sponsored CHC	with independent CHC	without CHCs	Total
Short distance	52.1	58.0	60.9	56.1
Low financial burden	42.1	43.0	44.3	40.3
Can access at any time**	6.2	10.0	31.0	15.0
Good service manner	11.6	14.0	14.4	12.9
High technical quality**	2.7	4.0	20.1	8.6
Less severity of illness*	6.2	14.0	5.2	7.3
Good personal relationship	1.9	6.0	3.4	3.2
Continuity of service	1.5	3.0	5.2	3.0
High reimbursement in insurance	0.8	1.0	1.7	1.1
Keep privacy	0.8	0	0.6	0.6
Others (convenience, contract institution, pre-payment, overall quality)	4.3	2.0	0.6	2.7

**Table 6-3. Reasons for attending community health centres**

The data are based on the responses from the self-respondents only (n=533). Chi-square analysis was employed to test the homogeneity of the different communities with respect to the reasons for attending CHCs (\*  $p < 0.05$ ; \*\*  $p < 0.001$ ).

The residents living in the community without a CHC seemed to be more likely to attend a CHC for reasons of seeking instant access and quality services compared with those who have access to a CHC. By contrast, the residents living in the community with a “well-performed” CHC were more likely to be driven by the “minor health problems” when seeking help from CHCs compared with those who did not have access to a CHC. This result may imply a difference in the expectation of CHCs between the consumers who did not have access to a CHC and those who did.

Of the 594 self-respondents to the questionnaires, 543 answered the question “What are the most important possible factors that might dissuade you from seeing doctors in community health centres?”. Concern about the competence of CHC staff was the most common reason for expecting not to attend CHCs. There was considerable concern about the capacities of CHCs to handle difficult cases, especially in the communities where the CHC had already been established. Meanwhile, financial difficulties remained one of the major reasons for people expecting not to seek medical help from CHCs. However, insurance arrangements were not a key issue in determining whether or not to visit CHCs (Table 6-4). This might reflect the fact that the insurance coverage was low

(29.4%) and the new insurance scheme allowed the IHSAs, the only resource to cover outpatient services, to be passed down to family members without sharing with others.

Reasons for not expecting to use CHC	Recognition rate (%) among residents in community			
	With hospital sponsored CHC	With independent CHC	Without CHC	Total
Poor technical quality	31.6	40.9	35.3	34.3
High financial burden	26.2	14.8	20.2	22.5
Severe illness*	13.8	26.1	16.2	16.6
Have to go to hospital because of incompetence of CHCs***	18.4	30.7	2.3	15.1
Long distance***	15.6	1.1	20.2	14.7
Bad service manner*	8.2	0	9.8	7.4
Difficulty of reimbursement in insurance scheme**	8.5	6.8	0.6	5.7
Can not access at some time***	0.7	0	11.0	3.9
No CHC	4.6	1.1	3.5	3.5
Low distance to other institution;	3.2	2.2	2.3	2.8
Bad personal relationship	2.1	1.1	1.7	1.8
Lack of continuity of service	1.1	0	1.2	0.9
Others: no illness; no time; no money; inconvenient;	3.2	6.8	0.6	3.0
Difficulty to keep privacy	0	0	0	0

**Table 6-4. Reasons for expecting not to use community health centres**

The data are based on the responses from the self-respondents only (n=543). Chi-square analyses were employed to test the homogeneity of the recognition rates of the reasons for expecting not to use across the three communities (\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ ).

CHS programs were designed to ensure geographic accessibility of healthcare. As discussed in Chapter Five, “convenience” was identified by most interviewees as a major contribution of CHS. The government propaganda also cited it as the biggest benefit that the CHS could bring about. However, this was not what consumers were principally concerned about. Geographic distance was perceived by consumers as a key element in considering whether to visit CHCs. Without geographic convenience, people would not consider visiting the CHCs. However, from the responses of consumers in relation to both of the above questions, considerations of cost barriers and clinical competence were clearly the major factors that would determine the final choices of consumers. In a survey of hospital outpatient visitors, we found that convenience and expenditure were top considerations for minor health problems while technical quality

was a dominant consideration for severe health problems. About 60% of patients would prefer to visit community pharmacies or adopt self-care strategies for minor health problems. Large hospitals were preferred for severe health problems (Ying et al., 2001). Another study in Nanjing found that 70% of consumers were reluctant to attend CHCs (Chao and Wang, 1999).

Consumers choose different health institutions for different purposes. My survey of the three communities showed uniformly ( $\chi^2$  test,  $p>0.10$ ) that those who intended to have their problems diagnosed were inclined to choose hospitals at municipal and provincial levels. Among the patients who visited the municipal and provincial hospitals, 71% reported for diagnostic purposes, while only 31% for the purpose of treating known diseases. By contrast, people were more likely to visit the health institutions at district or lower levels or private clinics and pharmacies for the purposes of prescriptions and treatment for known diseases. Half of the patients attending public institutions at district or lower levels, private clinics and pharmacies stated that they visited for the purposes of getting prescriptions to treat known diseases (Table 6-5). In addition, it was very rare for the community residents to visit the health institutions for preventive and rehabilitation purposes. Rarely cited reasons included: physical examination (3.6%), consulting health problems (5.6%), taking therapy or/and rehabilitation (2.0%), preventing diseases (3.0%), or others (1.0%). This result is consistent with the findings of another study, which revealed that a large proportion of CHS clients had not taken CHCs as first contacts. Instead, they came for prescriptions and nursing services (Cui, S. Q. and Guo, 1999).

Reasons for attending health institutions	In public sector of district levels and below (Group 1: %, n=39)	In public sector of municipal levels and above (Group 2: %, n=100)	In private facilities (Group 3: %, n=58)	<i>p</i> value of $\chi^2$ test		
				<i>Overall</i>	<i>Group 1 vs 3</i>	<i>Group 2 vs (1 and 3)</i>
Diagnosis and treatment	59.0	71.0	51.7	0.046	0.482	0.017
Prescription and treatment for known diseases	48.7	31.0	51.7	0.020	0.772	0.005

**Table 6-5. Reasons for selecting different health providers for the most recent attendance by people who saw doctors in the past six months<sup>107</sup>**

The data are from the survey of the most recent encounters of residents who saw doctors during the past six months. Chi-square analysis was employed to test for differences across the groups with respect to their reasons for selecting different providers.

Many interviewees identified the credibility of providers as one of the essential considerations of consumers in choosing providers. Currently, consumers had no available information to judge the professional status of medical practitioners, since the registration of medical practitioners was still in progress (MOH, 1999d) and no accreditation programs had been put in place. Consumers could only take their own or others' experiences as evidence of the professional competence of practitioners. The intensely competitive environment and disordered health marketplace forced consumers to become very cautious in choosing providers. One good example was the pharmacy services. There was no way for consumers to judge whether the so-called "physicians" working in community pharmacies were qualified doctors or not (Li, D. F. and Fen, 2001; Liu, Y. L., 2001). Even in some public sectors, the external "specialists" could be employed<sup>108</sup>. As a result, senior and familiar practitioners were preferred<sup>109</sup>. Given this context, advertising through community surveys might not be the most effective way of attracting consumers (as a passive recipient of services). Several studies have found that

<sup>107</sup> Patients might have more than one health problem and visited a doctor for the purpose of diagnosis for new problems and the purpose of treatment for known diseases simultaneously.

<sup>108</sup> The governments are now trying to fix these problems through enhancing the regulations.

<sup>109</sup> Historical context is important for attracting patients. For example, in one centre which originated as a MCH centre, gyn/obs remained an important function of the CHC because of the former institution in this location. The functions of the CHCs were partly determined by their original institutions.

most consumers prefer to seek medical help from large hospitals although financial difficulties were identified as a key obstacle (MOH, 1999d; Sun et al., 2002).

*People prefer to seek help from their familiar health professionals [.....]. They do not understand what we are doing when we pay home visit to establish health files for them. There is not enough propaganda. (GP, enterprise-sponsored CHC)*

*Once we sign a contract with residents, they always demand senior doctors with experience. The doctors are expected to solve all sorts of health problems. (GP, enterprise-sponsored CHC)*

*Not all of the patients who use our centre live nearby. Some come from quite far away, such as patients from other counties. However, all contract patients live within a certain distance. The patients from other counties come to seek help for various problems. For me, I am good at paediatrics, so many patients visit me for those problems. (GP, MCH-sponsored CHC)*

### **Insurance discouragement**

Prior to the recent health insurance reforms, primary care providers played the role of gatekeepers in the GIS and LIS. Members of these schemes had to be referred by the primary care providers for visiting other hospitals. The primary care providers were usually organisation-owned hospitals or clinics or contract hospitals (not necessarily primary hospitals). As user payments increased, gatekeeper mechanisms gradually lost their power to shape the flow of patients.

*There is no other health institution that is well regulated like us in our community. We are the only well-regulated health institution. Furthermore, about 80-90% of the residents living in our community are staff of Panzhihua Steel Company. Most of our clients are staff of this company. The pattern of providing services is similar to a contract. If they come to our centre, they can get 20% reimbursement. If they go to other health institutions that do not belong to this company, they have to pay all the expenses out of their pockets [.....]. If they go directly to the general hospital that supervises us, they can also get 20% of reimbursement for outpatient services and 80% reimbursement of inpatient services [.....]. However, some patients are not willing to go to the general hospital, such as the patients with chronic conditions. They thought it too complicated to get*



*prescription there, so they usually come here to order prescription. (GP, enterprise-sponsored CHC)*

When the MOLSS took over responsibility for the urban health insurance reforms and the unified insurance scheme, the gatekeeper role of primary care providers faced greater difficulties. The organisations lost their controls over the flow of patients. Meanwhile, there had been an increasing appeal to the rights of consumers. More freedom in choosing health providers was encouraged (MOH, 2000). As a result, contract providers were commonly extended to more than one. Generally, tertiary hospitals were preferred by consumers to serve as contract providers. This result is consistent with the findings of other studies (Dong, Y., 2001b). In Chengdu, people were free to choose any of the more than 100 hospitals recognised by the social insurance schemes.

*Most insured patients visited the municipal and provincial hospitals or their own hospitals. It was rare for the workplaces to contract with district hospitals. Even if the patients had more than one option in choosing providers, they would prefer to choose the institutions at the municipal and provincial levels, which were believed to be of higher quality. (assistant director, independent CHC)*

To encourage the use of primary health care services, the government intended to require greater copayment rates for secondary and tertiary hospitals (MOH et al., 2002). At least one primary institution was required to be selected as one of the contract providers (Hindle, 2000). However, these strategies could only be effective in inpatient services where a copayment was required. For the outpatient services, which were covered by the IHSAs, it is open to consumers to decide where and how to spend the money within the entire range of contract providers. Although the IHSA is virtually a private account without social sharing functions, insured consumers still prefer to use the IHSAs first rather than to pay cash. As explained by one interviewee, people had a strong feeling of uncertainty towards the individual account, being afraid of a change of policies and the possibility of losing money in the IHSA.

*We haven't been approved by the department of medical insurance as a contract provider. Some patients came to enquire about this, but we have not installed a card reader. The patients thought that since they couldn't withdraw the money from their account, they would prefer to visit others so that they can use the*

*money in the account first rather than pay cash. Although theoretically, all the money in the account belongs to the holder of the account, it is not the same as cash that you can use for whatever you want. What if the policy changes? It's out of your own control. (assistant director, hospital-sponsored CHC) <sup>110</sup>*

The responses of the CHCs to the new insurance arrangements varied dramatically. On one hand, many CHCs that were not covered by the previous insurance schemes saw it as an opportunity to attract the insured patients; on the other hand, some CHCs that had served as gatekeepers in the past were worried about the loss of their consumers. As said by two staff working in a work unit health centre, “*patients can go wherever they like, with the same policy, why should they choose us as care providers?*”. Despite “*all CHCs might be eligible to be covered by the new insurance schemes*” (an official of the insurance authority), some interviewees complained that the same policy on hospitals, CHCs, and community pharmacies virtually went against the CHCs. Tai and colleagues (1999) argued that the contract hospital policy could possibly provide further perverse incentives to discourage consumers from seeking first contact medical help from primary hospitals.

*We made a survey in March last year. The residents would like to visit their contract health providers first, no matter how far away. The next choice is to buy some drugs nearby. Most of our clients are uninsured. Many residents said that they would like to come to our centre when the new insurance scheme is implemented [.....]. There is a transportation school and a financial school around the centre. Many insured patients will visit us next year. One teacher from the financial school told me that he couldn't decide whether to move to a new house in another residential area or not, although the house will be new, there is no CHC. (assistant director, independent CHC)*

Whether insured consumers would be encouraged to visit CHCs by the new insurance arrangements depended on multiple factors, both positive and negative. While consumers enjoyed more freedom in choosing care providers, people were expected to

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<sup>110</sup> At the time when I undertook my field study, many hospitals and community pharmacies had installed the reading machines. A few CHCs were talking about the installation of card readers.

be more conscious regarding the trade off between prices and quality of services. Under a universal policy for different providers, the private clinics and pharmacies had a competitive advantage in terms of price. By contrast, hospitals were seen by consumers as more competitive in technique and quality of services. Consequently, CHS could possibly attract the consumers who needed services that were beyond the capacity of private clinics and pharmacies and simultaneously demanded cheaper prices than hospitals. To prove this assumption, I interviewed a hospital manager in March 2002, one year later, after the implementation of the new insurance scheme. The evidence showed that the new insurance scheme might have decreased the overall demand for outpatient visits. Some patients bypassed hospitals and CHCs to purchase cheaper drugs in the community pharmacies. Meanwhile, demand for inpatient services also declined because of the deductible requirement of the SPFs. Some patients turned to the CHCs and outpatient clinics to seek for same day care.

*Hospital visits declined dramatically from January to August last year since the implementation of the new insurance scheme. However, the visits increased again gradually. Currently, the outpatient visits, including CHCs, have recovered to the same level as before, but the hospital bed occupancy rate remains low, because of the front end deductible requirement of the insurance schemes. People have to pay part of their expenditure on inpatient services out of pocket, which is a fairly high financial burden. Therefore, many people are trying to avoid being admitted to hospitals. The CHCs are quite busy providing intravenous drip services. (vice president, municipal hospital)*

### **Poor empowerment of consumers**

Although the current CHS was not strongly supported by consumers in general, a few CHCs had proved that once the community residents appreciated the benefits of CHS, they would gradually accept these programs

*With our hard works in the past two years, and the policy and propaganda, the residents begin to visit CHCs for home services and making contracts gradually. (president, district hospital)*

*The difficulty is that we have to experience a certain period to let residents accept us gradually. The community services at the beginning period were*

*extremely difficult. Now, it's OK. Our GPs are welcome to visit the communities when they say they work for the centre. People know what we provide; they know that we are not coming for marketing of merchandise. Instead, they know that we try to let them understand us and to give them services. (assistant director, independent CHC)*

Therefore, the core issue was how to meet consumers' needs and demands. Unfortunately, the majority of CHS programs were service-led rather than needs led. The community needs were not well understood by the providers (see details in Chapter Five). Sometimes, poor communication between providers and consumers could lead to potential risks for the consumers. Some CHCs sold drugs blindly following consumers' requests without considering the scientific appropriateness. Rational use of drugs thus gave way to the business interests.

*The patients would like to come to visit us, because we do not charge consulting fees. They only need to spend about 10 minutes to buy two or three yuan worth of drugs to see if it is effective. Because they live nearby, they can come again easily if they feel it is effective. They don't want to store drugs at home. It is not like rice, which can be used for the next time. It's different. They are right. (director, hospital-sponsored CHC)*

There were some grounds for misunderstandings between providers and consumers regarding providers' intentions. Providers felt that they were offering a service in contrast to the feeling of many consumers that the providers were doing something for their own interests. In my interviews consumers were seen mainly as recipients of services by almost all of the managers and practitioners many of whom expressed strong feelings of "sacrifice" and "contributing". They believed that these CHS programs were designed to benefit to consumers, but without much benefit to the providers.

By contrast, consumers did not understand and accept the CHS arrangements. They thought that the CHS programs were another strategy of hospitals (or CHCs) to fish money out their pocket. Indeed, consumers were perplexed and sometimes angry about being involved in activities (such as the creation of the health files and the planned community activities) which commenced with great promise but were not followed up.

*People do not understand the CHS. When we conducted baseline survey, many residents were not courteous towards us. They answered us while playing Majong*

*[.....]. We have just begun to develop a new model but most of the residents don't know anything about it and they can't understand the pattern of home based services. At the initial period, people worry about the possibility of fraud. They can trust us only when they benefit from our services. (GP, independent CHC)*

Although there has been huge amount of propaganda in public media (including newspaper, TV, radio and internet) since 1997 to encourage people to seek medical help, in particular, primary care<sup>111</sup> from CHCs, lack of propaganda was still cited by some interviewees as one of the main reasons for people's lack of confidence in GPs and CHS.

*The company staff don't understand us well enough, because of the lack of propaganda. (director, enterprise-sponsored CHC)*

*It's a problem of the entire environment. When I participated in the first training class, many people, the residents didn't know CHS at all. It should be a very important event for the first training class of GPs in Panzhihua. The TV, broadcast, and newspapers should address this event. But unfortunately, I discussed this issue with some colleagues privately; we did not create a strong environment supporting the CHS. Many people, even our staff, don't know this event. We have to spread information about the CHS by ourselves [.....]. People still don't understand the CHS. (director, enterprise-sponsored CHC)*

But obviously, it was not merely a problem of propaganda. As a matter of fact, we could see or hear frequently positive reports about CHCs and CHS in newspapers, radios, TVs, and Internet. Meanwhile, many CHCs also made great efforts to persuade people to accept their services. But it was still difficult for the community residents to accept GPs and CHS before they had seen CHS as responding to their own needs. Lack of community participation in developing CHS programs could have contributed to feelings of alienation and suspicion between providers and consumers. Many residents saw CHS as something that others were trying to sell to them. Without realising any potential individual benefits, people could easily refuse home visits, especially within

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<sup>111</sup> These propagandas usually followed the general line that "Hospitals deal with major conditions, while CHCs deal with minor problems. You need not to be bothered to go out of your own communities in seeking medical help for minor problems."

the context when hospitals were not difficult to access geographically anymore. Actually, it was not uncommon to see evidence of consumers' antipathy to CHS (Guo, Q. and liang, 1999).

*We have to visit several households in one day. Sometimes the clients do not wait for us as we make. Sometimes when we are late, they show angry to us and blame us. (GP, MCH-sponsored CHC)*

*We have done a lot propaganda. Last year, we arranged five or six on street presentations at weekends. We have also been playing the cassettes at the CHS station to spread the knowledge of CHS and the conditions and terms of health contracts for several months. Furthermore, we visited every household to create health files for them. But the residents still don't understand the CHS program. The situation has begun to be improved since the implementation of the (new) medical insurance scheme [... ...]. At the beginning of the CHS program, our staff kept complaining about the reception they were getting when they did home visits every week. We came to their home to deliver services, but they were reluctant to let us in. Sometimes we were even left outside doors. Now it's better, because we have appeared in their communities for many times, the residents and patients began to know us. (director, enterprise-sponsored CHC)*

*It is not common for our residents to refuse our home visits, however, it happens. (director, hospital-sponsored CHC)*

Clearly, the top-to-down arrangement of the CHS activities and the failure to build in consumer participation was one of the causes of the lack of consumer support. Although it was not difficult to find the term of "consumer participation" in the government documents, the whole picture of CHS was shaped by the simple formula "CHC+GP+Six Functions". Such a deviated understanding of the principles of primary health care inevitably led to a degree of alienation on the part of consumers.

Actually, consumers might not see CHS as an exclusive function of CHCs. Through the questionnaire survey, I found that even in the community with independent (non-hospital sponsored) CHC, more than 60% of residents were still not sure whether or not CHS were delivered in their community, although more residents had noticed the existence of CHC and associated services compared to the residents living in other communities (Table 6-6). Indeed, consumers were more likely to think that the CHS

were developed in their communities once they saw the establishment of CHCs. More residents living in the community without a stand-alone CHC thought that no CHS was provided in their community than did the others (Table 6-6). However, it seemed that community residents did not perceive CHS as an exclusive activity of CHCs. In the community without CHCs (neither independent nor hospital-sponsored satellite CHCs) 18% of residents thought that CHS had been delivered in their community, which was similar to the response from another community with hospital-sponsored satellite CHC. This indicated that consumers cared more about the real components of services delivered in their communities and the benefits they could enjoy rather than the formal establishment of services and facilities, such as the development of CHCs and GPs.

Communities that respondents lived in	Number of respondents	Are there any community health services in your community?		
		Yes %	No %	Don't know %
With hospital sponsored satellite CHC	306	17.7	9.8	72.5
With independent CHC	106	43.4	0.9	55.7
Without CHC	182	19.8	42.3	37.9
Total	594	22.9	18.2	58.9

**Table 6-6. Recognition of CHS from respondents (self-respondents only) by communities**

The data are from the responses of the self-respondents only (n=594). Chi-square analysis was employed to test the homogeneity for the three communities ( $\chi^2 = 134.242$ ,  $p=0.000$ ).

## Conclusion

There is not a great deal of support among the residents for the development of CHS. Only about half of the residents expressed an acceptance of the CHS programs. In contrast with the government expectation, consumers are not predisposed to using CHCs as their service provider of first contact. The medical services delivered by CHCs were commonly seen by residents to be of poor quality. There is some distance between the governmental model and the kind of CHS programs that residents would wish to see developed. Since local residents have not been involved in the development of CHS there have been no opportunities for any coming together of these two sets of perspectives. Lack of active involvement of community residents and consumers appears to be a continuing obstacle to the development of CHS.

## Conclusions

### **Community health services need to be seen as part of system reform, not purely institutional or sectoral development**

Although there have been some debates about the roles of primary care providers in contributing to health improvement (Jewell, 1996), the recent series of studies conducted by Starfield and coworkers have demonstrated the benefits of primary care (Starfield and Simpson, 1993b; Starfield, 1995; Forrest and Starfield, 1996; Forrest et al., 1999a; Cassady, C. et al., 2000a; Shi, L. et al., 2002). Equal access to health care, in particular to primary care, is becoming a priority in the health reform agendas of both developed and developing countries (Starfield and Simpson, 1993b). Clearly, it is also a focus of the CHS reforms in China (MOH et al., 1999).

The achievement of a primary care led system depends on a system change rather than simply putting new institutions in place. The Chinese government has concentrated up until now on establishing a new set of health institutions (CHCs). The CHCs were supposed to become the primary contact point for consumers of both public health and medical services. The establishment of CHS, CHCs and GPs was associated with very ambitious expectations of fundamental changes to the hospital-led system and the rejuvenation of PHC. However, without introducing a coherent package of policy and administrative changes in line with the principles of primary health care and the empowerment of consumers, the CHS reforms are unlikely to be very effective in promoting population health nor in improving efficiency. In actual fact more resources were being introduced into urban communities, intensifying competition.

The lack of coherence in policy and administration is at least partly due to the multiple parallel hierarchical bureaucratic structures and the lack of coordination and collaboration between different hierarchies, both within and beyond the health system. The well-organised hierarchies have all contributed to the top-to-down implementation but made it much more difficult to mobilise and harmonise resources between and across the hierarchies. Despite the policy emphasis on cooperation in building the CHS (MOH et al., 2002), the current CHS programs have focused largely on setting up CHCs, leading to the exclusion of other community resources.



### **Community health services need to be localised**

Because of the lack of budgetary capacities of governments and oversupply of hospital resources, the administration of CHS were generally allocated to local hospitals. The attachment of CHCs to hospitals provided the CHCs with a strategy of coping while government funding and policies lagged behind. For example, the CHCs could enjoy the same policies as their parent hospitals and be covered by the insurance schemes<sup>112</sup>. Hospital sponsorships were also assumed to be a strategy for avoiding the waste of health resources. However, the hospital sponsorships made the inter-sectoral links and collaboration more difficult because of the intensive competition across the healthcare market, especially among the providers who offered the same level services.

The government has expected that CHCs would meet the primary health care needs of local communities through providing comprehensive services. But most CHCs did not have the capabilities to identify and respond to their local community's needs. Obviously, there is a need to reorient the roles of CHCs. Setting up CHCs with the requirement that they cover all six functions does not necessarily mean that all of the local residents' health needs will be appropriately met, especially when other community resources are not mobilised.

The centralised control over CHS was perhaps necessary as a strategy to force the hospitals to sponsor CHS development. In Western countries, hospitals might also invest in CHS or organise community-oriented programs (Anh and Tram, 1995). Bentley (1994) and other commentators have argued that hospitals need to respond to community needs but in a fee-for-service system there are no economic incentives to prevent hospitalisation and the use of specialist curative services. Paradoxically this generates a perverse incentive to discourage hospitals from being involved in CHS (Farrior et al., 2000).

The tight centralised control over CHS has ensured a unified model of practice but did not necessarily produce the anticipated outcomes. On the contrary, it led to the waste of resources and a bias towards the delivery of more profitable services. This phenomenon had been noticed by the National Political Consultative Conference (1998)

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<sup>112</sup> Hospitals and CHCs need to be recognised by the insurance authorities separately.

in 1998, just one year after the implementation of the national CHS program. But unfortunately, the situation remained unchanged. Clearly, the planning and management of CHS need to be localised to meet the diverse demands of different communities.

### **Developing partnership is important to meet community needs**

Since no single institution or professional can assemble all of the resources and competencies necessary to promote and maintain population health, community partnership has been strongly recommended by many authorities and commentators (Blackmon, 1999; Weiner, B. J., Alexander and Zuckerman, 2000; Baxter, 1998; Farrior et al., 2000). Through such partnerships, the functions of different providers can be developed in ways which complement each other and unnecessary overlaps of services can be reduced. Despite the policy provisions discouraging the involvement of any organisations except CHCs and GPs in CHS delivery, various forms of partnerships have been explored. For example, some medical universities had been involved in the planning of the local CHS programs and have provided expertise in areas for which the CHS practitioners might be unprepared such as community diagnosis (Aday et al., 1994; Chen, B. W., 2000a). As mentioned earlier, some private resources and community pharmacies had also invested in CHCs (Liu, H., 2002) and the PHIs had also expressed interests in CHS. However, these partnerships were largely driven by market forces or self-interest, which is different from real partnerships oriented around the interests of consumers (Bibeau et al., 1996; Browning, 1996). Obviously, this kind of partnership development will need strong leadership and policy encouragement, especially in the current market oriented and fee-for-service environment.

### **Development of community health services should be in line with local health planning**

Local health planning is a common strategy for developing community partnerships and addressing population health (Victoria, 1995). The identification of local health priorities and plans need to take into consideration the interests and capabilities of all of the stakeholders. The roles and functions of various health providers need to be coordinated to maximise the outcomes for population health. In this sense, local government might be the most appropriate organisation for leading local health planning. The present situation with CHS allied closely to the health hierarchy could easily lead to

a biomedical approach to health. Meanwhile, other activities targeting the social determinants of health are not being well integrated into CHS programs.

### **Empowering consumers should be one of the priorities of community health services**

The practice of CHS has deviated from the original concept of CHS defined in the governmental policy document (MOH et al., 1999) and also in the international leadership documents (Reagan and J., 1997, pp. 5-6). The key strategy “mobilising community resources and community participation”, which is extremely important in differentiating CHS programs from others health policy models (Filinson, 1997; Treno and Holder, 1997; Hayes, 1999) was unintentionally ignored. Experiences from both China and overseas have demonstrated that healthcare can hardly achieve success by seeing consumers as passive recipients, particularly when long term and continuous care plans were needed (Crowley and Drinkwater, 2000; Davis, R. M., Wagner and Groves, 2000). The WHO, cited by Dong (2001b) thus suggested that CHS programs should evolve from the communities they serve and involve the community in the entire process of CHS activities, including planning, delivery and evaluation. Bell and coworkers identified three advantages of consumers’ involvement in CHS: firstly, consumers are the principal stakeholders whose needs and interests are the central focus and justification of the work of all health providers; secondly, consumer participation makes the service delivery process more democratic and effective; thirdly, consumer participation can not only protect the rights of consumers, but also ease tensions between providers and consumers due to the contradiction of quality of services and limited resources (Bell, Brown and Morris, 1995). In many areas consumers know better than health care providers about their own needs and what is best for them (Blackmon, 1999). Moreover, changes were unlikely to occur without the involvement and support of consumers (Shediac-Rizkallah and Bone, 1998). This study has clearly illustrated the importance of increasing community knowledge about what is appropriate and inappropriate practice. Public health education could be an effective strategy to alter consumers’ expectations of what to expect of service providers (Sangl and Wolf, 1996; Sainfort and Booske, 1996).

One of the important findings of my study was that the poor performance of CHS could have led to the loss of trust by consumers in CHS. The cultural environments

developed in the past decades have led people to believe that well-equipped hospitals provide better quality services (Dale et al., 1995). The conflicts of interests and lack of coordination between CHCs and hospitals might form further obstacles to gaining consumers' trust regarding CHS. Consumers might worry about the possible adverse results of seeking medical help from CHCs. Currently, most CHS users regard CHCs as a substitute for hospital services, which they will use depending on their consideration of the competencies of providers, geographic locations, hospital environments (crowd, queue, and waiting time), service manners and financial burdens. Some CHCs had been aware of this issue. A few interviewees identified easy referral to hospital specialists and more communication with specialists as one of the important factors attracting consumers to contract with CHCs. Meanwhile, however, many interviewees believed that the close links that publicly owned CHCs have with governments was an important factor in gaining the trust of consumers<sup>113</sup>. Indeed, some consumers might have held very high expectations towards the governmental initiated CHS programs. But eventually they would be disappointed without seeing real benefits.

When insurance schemes did not privilege the first contact role of CHCs, the HCA was used as an alternative strategy to develop long-term relationships between CHCs and their local communities. However, CHCs are not the only set of agencies trying to persuade residents to enter into HCAs. As a matter of fact, it was more difficult for CHCs to contract with consumers than their hospital counterparts. Consumers appear to be aware that the purpose of the HCAs is to secure a relationship (and a long term revenue stream) but are not persuaded that there are any advantages for them in committing to one provider.

In a highly centralised political system such as China, consumer participation is best coordinated through the local government. Without supports from the SAOs and the residential committees, entering into communities would have been a problem, no matter how much rhetoric there is about orienting services around the community needs. Clearly, the community ownership is important and this could be achieved through better inter-governmental collaboration and community participations, which in turn,

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<sup>113</sup> Private sectors are now allowed to be involved in CHS according to the most recent policy (MOH, Office of System Reform of State Council, State Planning and Development Committee et al., 2002).

could make CHS easier to implement. However, this is by no means a straightforward task. There exists a prevailing attitude among managers, providers and consumers that health services are purely a biological process involving intensive technical expertise. Meanwhile the boundaries between government departments remain rigid. Disputes, dodgeries and blamings were more likely to occur than collaboration.

### **Governments need to align policies in ensuring accountabilities**

The WHO (2001) pointed out in the 2000 report that when hospitals enjoy high degrees of autonomy, health service accountability is better secured through monitoring, regulation and economic incentives rather than hierarchical supervision. Governments need to align incentives to encourage best outcomes of service delivery.

### Community health centres also need flexibility

My study showed that the CHCs that enjoyed greater autonomy in recruiting staff and determining service arrangements seemed to be more likely to be financially successful because of the great pressure exerted on the organisations and the direct linkage between staff's interests and organisational success. Those CHCs were also more likely to employ higher quality staff and show more flexibility in responding to consumers' demands. Further evidence would be needed to confirm this.

### Protecting the poor

As the WHO, cited by Dong (2001b) has argued, the CHS “would be feasible for all communities, even the most impoverished, to develop effective health care based on a system that reflects the inherent characteristics of the community”. The CHS should be “free of economic barriers, unlimited by social or cultural distinctions and within reasonable easy reach of the whole population.”. Most of my interviewees identified financial difficulties as the biggest obstacle facing the development of CHS. Some interviewees believed that once the financial barrier had been removed, the CHS would be more widely accepted. Financing is really a big challenge in designing a new health program such as CHS (He, G. P. et al., 1999; Wang, M. et al., 2000b). In developing countries like China, low government inputs for primary care is common, especially within the context of user charges (Berman et al., 1989). A poor resource base could lead to a poor beginning and dissatisfaction of consumers which in turn would impede

the likelihood of long term sustainability (Shediac-Rizkallah and Bone, 1998; Hao et al., 2001; Hua et al., 2001; Zhang, Y. et al., 2001).

The current CHS program is heavily dependent on hospital inputs and is focused on consumers who can afford to pay for its services. This might have led to neglect of some services that were critical but less individual related such as health promotion and social support and basic health care for the poor where user charges are difficult to collect. Although preventive services sometimes might be profitable (Yang, X.L. et al., 2002a; Yang, X.L., Hsu-Hage and Zhang, 2002b), many population-based services where consumers are reluctant to pay out of pocket will need government funding supports. Meanwhile, an appropriate pricing policy is required to benefit both CHCs and the poor populations (Zhang, X.P., 1999c). Some researchers recommended that a big price distance between CHCs and hospitals (2.5 times) is needed to keep patients in CHCs (Hua et al., 2001; Zhang, Y. et al., 2001).

The primary health organisations faced great financial pressures in the healthcare market. Government investments presently only compensate for a very small proportion of CHS expenditures (eg. 10% in one CHC in Beijing) (Wang, M. et al., 2000b). A survey in Shanghai showed that 75% of hospitals failed to recover CHS investments (Yang, H. Q. et al., 2000). One third failed to maintain a balanced budget (Gan et al., 1999a). Since many CHCs (eg. 80% in Beijing and Shandong and 30% in Shanghai) needed to rent real estate (Li, S. X. et al., 1999a; Wu, G. Y. et al., 1999b; Wang, M. et al., 2000b), some were even forced to close just because they could not afford the commercial rents (Dong, Y., 2001b). Many of the CHCs had to use the revenues from medical services and particularly pharmaceutical sales to pay for the planned community activities (Wang, M. et al., 2000b; Jiang, Y. M. and Meng, 2002). In this context, the CHS inevitably concentrated on revenue generation. Poor populations were less likely to become priorities of these CHS programs.

#### Encouraging pluralistic financing channels

Given the limited budgetary capacities of governments, pluralistic financing approaches should be encouraged. Yu (1998) argued that the real estate should be provided by the SAOs while the health authorities could provide human resources and part of the operation expenditures. The community resources outside the health hierarchy (eg non-government organisations and private facilities) could also play a role

in financing CHS. In recent years, there has been a strong call for transferring administrative responsibility for all health institutions to the health authorities (Central Committee of Communist Party and State Council, 1997). The increasing freedom of consumers to select providers has forced many enterprise-owned health facilities to open up to the healthcare market. Those health institutions had played important roles in providing primary care for employees. In Chengdu, there were 512 enterprise-owned health institutions. Those health institutions will be separated from the enterprises gradually (Chen, W. C., Tu and Li, 2001c). Some will be privatised. How to maintain the CHS functions of these health institutions warrants further study.

### Steering CHS through contract and accreditation

The existing CHS accreditation and evaluation programs have encouraged more resource input, but have not contributed greatly to improvements in the efficient use of resources. Accreditation programs based on the principles of continuous quality improvement (CQI) can provide some lessons to China (Quality Improvement Council, 1998, p. 11). The philosophy of CQI is different from quality assurance (QA). QA focuses on achieving a set of goals (standards), whereas CQI aims to identify the failures in process that can be improved and emphasises continuously striving for improvement (Mair, 1995). While many western countries have begun to turn QA into CQI (Mair, 1995; Quality Improvement Council, 1998), China is still trying to implement a QA approach based on stipulating minimal requirements for CHCs and GPs. In a central hierarchical system where administrative instructions were still going well, this approach could be easily implemented. However, maintaining a minimal standard of resources does not necessarily guarantee better outcomes. When internal workforces are not well motivated QA could be counter-productive. The QA approach emphasises “what should be” rather than “what could be improved without new input”. Many CHCs are inclined to use the QA approach to get more resources without considering the efficient use of these resources.

### **Multiple strategies for workforce development**

The relatively low professional backgrounds of GP candidates contrast sharply with the CHS overdependence on GPs. Even where specialist doctors from large hospitals (perhaps tertiary hospitals) are encouraged to work in CHCs (MOH et al., 2002), it is

still unlikely that the diverse needs of community residents can be fully met by a single health professional. The policy of tying CHS functioning to the role of GPs has led to frustrations, the excision of some services and complaints about the shortage of human resources. The GPs' dominance in CHS contrasts with the understated roles of nurses, PHWs, and allied health professionals. This has resulted in clinical dominance and impeded the development of a social approach to health. The Australian experience has demonstrated that allied health professionals can play important roles in CHS (Duckett, 2000, pp. 204-10). Meanwhile, the functions of PHWs could possibly be further cultivated, in particular, for the planned community activities that involve many ideas and principles of epidemiology and preventive medicine.



## Chapter Seven

# **TRAINING FOR THE COMMUNITY HEALTH WORKFORCE**

The initial design of this study focused on the training needs of GPs but during the course of the study the problematic consequences of the current policy overemphasis on the role of GPs in CHS became more apparent, in particular its contributing to confusion with respect to the purposes and objectives of CHS at the local level. Although the GP role is closely associated with the concepts of PHC and CHS, seeing GPs as the only significant workforce in providing PHC is counterproductive. It could lead to non-harmonious relationships between GPs and other providers, and between CHCs and other health institutions. The PHC sector is not only an initial point of entry for individual health care, but also functions to ensure integrity, coordination, and continuity of care (Weiner, B. J. et al., 2000). However, these responsibilities are shared by a diversity of providers, including as well as GPs, other generalist such as general internists and general paediatricians, community nurses, allied health professionals, PHWs, pharmacists, paramedical practitioners, and consumers. In view of the importance of population health objectives also and the social determinants of population health, non-health organisations are frequently included in the CHS partnership in recognition of the wide array of functions and services that lie beyond the reach of health service delivery systems (Weiner, B. J. et al., 2000). The training needs of one particular professional group cannot be properly analysed without taking into account the roles of other providers addressing related goals and the relationships between these different practitioners and organisations. Based on these considerations, I extended my focus to the entire CHS workforce, looking towards training programs that could contribute not only to the improvement of the capacities of primary care providers, particularly GPs, but also to ongoing innovation and improvement of the service delivery system at large.

In this chapter, I document the existing CHS training programs and perceived training needs. Although my interview was limited to CHS managers and GPs, the training needs which I outline cover a broader range of professionals.

## **Current training arrangements**

### **Training for managers**

CHC managers came from a variety of backgrounds. The majority of them came from medical backgrounds. Some were GPs; others were hospital specialists. Only one CHC was headed by a nurse. A few CHC directors also carried management roles in the parent hospital, such as head of the department of medical affairs or even hospital president, depending on the attitudes and views of these hospitals in relation to CHS. Usually, the CHC managers were not professional managers. The majority of managers worked as managers on a part time basis and had not given up their original professional activities.

All of the managers included in the interviews had at one stage or another participated in short-term training. However, these training programs were not designed exclusively for managers. Only one manager had participated in a CHS workshop specifically designed for managers by the provincial health bureau. The others had all participated in short-term intensive training programs for GPs and nurses (ranging from two weeks to three months).

### **GPs: a core target of training**

In Panzhihua, the municipal health authority organised a two-week intensive training program for GPs. Only those who participated in the training program and passed the examinations were recognised as GPs<sup>114</sup>. The training program was co-designed by the municipal health authority and a medical university. It was divided into two blocks. The first block focused on the basic concepts and principles of CHS and was

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<sup>114</sup> It is different from the registration of doctors.

mainly taught by the university teachers, while the second block focused on specific clinical issues and was resourced by tertiary hospital specialists.

In Chengdu, by contrast, the municipal health authority did not organise universal training programs for GPs. This responsibility was devolved to the local level; such training could be sponsored by district health authorities, hospitals, or CHCs themselves. Since there were no agreed standards, the arrangements for these training programs varied considerably, ranging from two-weeks part time training to three-months full-time training. However, the themes covered by these training programs were similar to the Panzhihua training program, including both the basic concepts and principles of CHS and the technical principles of disease management. University teachers were quite frequently involved in these programs also. It appears that the contents of these training programs deviated somewhat from the daily activities of GPs with a few interviewees complaining, *“It was more appropriate for the leaders”*.

The pattern of training depended on the trainers but most commonly would be based on lectures. It was rare for the fellow students to learn from each other and share their experiences. Interviewee comments on these training programs suggested that participants obtained a basic understanding of the governmental policy requirements for CHS, but they did not learn how to implement community health programs within their own specific environments. There was a strong desire to learn from other practitioners.

*Through the intensive study, the GPs changed their concept of CHS. However, it has nothing to do with any change of working pattern. They are still working in the same way. (director, enterprise-sponsored CHC)*

*I think that the health authority should often introduce others' experiences to us or arrange some visits to others. We should share experiences. It would be very worthwhile. (director, hospital-sponsored CHC)*

*More appropriate training is the key for GPs to accept the concept of CHS (director, hospital-sponsored CHC)*

### **Training for nurses: a byproduct of GP training programs**

In line with the development of GPs and CHCs, community nursing has emerged as an associated professional group. Although several international collaborative projects aiming at strengthening community nursing have been successfully implemented in

China (Edwards et al., 1999), the concept of community nursing remains ambiguous and many differences exist between China and western countries. For example, in the UK, Australia, and some other countries, district nursing, MCH surveillance and support, and school nursing are three essential components of community nursing. In China, by contrast, those activities were all organised and delivered by either PHWs<sup>115</sup> (eg. school nursing) or medical doctors (eg. MCH care). In terms of training, the CHCs put their main emphasis on GPs, but pay less attention to community nursing and other health professionals. By 1999, 68% of municipalities had developed CHS training programs which were mainly targeted towards GPs. Of these training programs, only 66% were also targeted towards nurses and PHWs (Yang, H. et al., 1999b).

Most community nurse training programs are attached to GP training programs and have adopted a similar curriculum. The general themes covered in the community nurse training programs are almost identical to those for GPs, except for a few supplementary modules dealing of nursing issues (Table 7-1).

Themes	GPs	Community Nurses
Policy and management of CHS	+	+
Principles and strategies in CHS	+	+
Introduction of general practice	+	+
Health promotion and preventive services	+	+
Introduction to community nursing	+	+
Disease management	+	-
Data analysis	+	-
Rehabilitation	+	-
Nursing procedure in community care	-	+
Care for patients with chronic conditions	-	+

**Table 7-1. Comparison of training themes for GPs and community nurses**  
(based on the training programs participated in by the interviewees)

<sup>115</sup> Sometimes staff with nursing backgrounds could serve as PHWs.

## Self-perceptions of training needs

Self-perceptions of training needs can provide valuable information about the urgent concerns of the trainees arising from their daily activities but it should not be taken automatically to direct training arrangements. As discussed earlier, the self-perceptions of training needs may be shaped by distorted understandings of the concept of CHS and biased arrangements of CHS activities.

### Perceived training needs for managers

#### Both health and non-health managers needed to be trained

The interviewees identified training needs for managers working both within and beyond the health industry. Many interviewees were aware of the importance of collaborating with non-health organisations in delivering CHS. It was widely believed that getting support from officials in charge of community services, departments of civil affairs, police departments, and the residential committees was extremely important. There was a consensus that the relevant governmental officials should have received training with a focus on CHS in order to improve their understandings and collaborations and encourage better management.

#### Health managers should be responsible for building organisational capacity

The health managers were more interested in practical managerial skills, such as how to provide CHS, how to encourage community involvement, how to motivate community practitioners, and how to organise community activities.

*(I am wondering) how to motivate our practitioners through policy, incentives, or whatever. (director, hospital-sponsored CHC)*

Some interviewees criticised the current management arrangements. They believed that health managers should pay more attention to the community activities and take real steps to attract consumers rather than to focus purely on clinical services and propagandas. The managers “*don’t know how to mobilise community and encourage participation of residents.*” (director, hospital-sponsored CHC)

Some interviewees expressed concern regarding the mismatch between the competency of CHC staff and the procedures required by the health authorities. One of the important issues concerned information systems. Computing was believed by many managers to be an essential instrument to facilitate the community assessment and ensure continuity and coordination of care. But very few staff could use the computers properly.

*We have been installed with computers, but we haven't used them yet [... ...]. We need staff who have computer and statistical expertise. (director, enterprise-sponsored CHC)*

*We should offer computer training to our staff so that they can analyse data and make community diagnosis. They are very poor in computer sciences. (director, enterprise-sponsored CHC)*

### **Perceived training needs for GPs**

University based degree education for GPs was criticised by some interviewees. One CHC manager stated clearly his reluctance to recruit staff from among the new graduates of medical universities and colleges, no matter which specialties they had studied. Most interviewees agreed that medical students needed some experiences in hospitals (residency training) to gain basic clinical skills. *"They need at least 2 years clinical rotations in hospitals"* (director, enterprise-sponsored CHC). *"The in service training should last for at least two years"* (assistant director, independent CHC). A survey among the managers of primary hospitals showed that only 27% of the managers thought that undergraduate degree education for GPs was appropriate, while 58% of the managers believed that in-service training was more important (Yang, H. Q. et al., 2000).

Intensive full time training was also thought to be important. To avoid interfering with the daily works in the CHCs, the managers hoped that the training could be arranged on a short term basis and be planned as multi-phase blocks. One week for one block was suggested by one GP, *"it's better to focus on one specific topic in each one-week block with supports from specialists"* (GP, independent CHC).

### Enhancing GPs' awareness of communities

As the predominant workforce in CHS, GPs were criticised by some interviewees for purely focusing on clinical services and not being more oriented around community needs. Lack of knowledge and skills in epidemiology was expressed as a common problem in CHS, which prevented GPs from understanding community needs and orienting their practices to the local population needs.

*Many of the GPs do not have real awareness of their communities. They just follow orders from their managers, without considering community problems and how to manage these problems. (GP, independent CHC)*

*The CHS have raised higher requirements for GPs. They have to develop more comprehensive knowledge structures than specialists. (director, hospital-sponsored CHC)*

### Improving clinical skills

Both managers and GPs expressed high demands of clinical training for GPs. There was a common sense that GPs should be trying to solve a wide array of health problems independently. Clinical skills were believed to play a key role in CHS. It was seen as a big challenge for GPs to work in a less supportive environment with poor equipment and lack of opportunities to consult with senior specialists.

*The training classes should provide details on clinical management of age-related diseases. We can not find much material. We usually get our information through newspapers, but it's rare to find information about CHS. I ordered one-year issue of "Chinese GP". (GP, enterprise-sponsored CHC)*

*Many medical practitioners in CHCs are not qualified as GPs, even not qualified as internists. Their clinical skills are too poor. It's a history issue. Therefore, we should try hard to develop GPs and pay more attention to the improvement of clinical skills of community practitioners, especially for the skills in dealing with common diseases [.....]. CHS must address the clinical component. If the community practitioners can not diagnose diseases, they would either refer all patients to hospitals or make wrong decisions and put people's health at risks. (GP, independent CHC)*

Enhancing the domains in which the trainees had no previous training or experience

Most interviewees believed that the clinical training programs should be personalised since GPs were transformed from various backgrounds. While addressing the wide range of health problems that GPs had to deal with, specific attention should be directed to the shortfalls of each individual GP associated with their previous backgrounds and experiences.

*GPs are very important in community health services. The community practitioners should not be too specialised [.....]. However, it's difficult to get appropriate training through intensive training classes. We should send them out to be trained continuously [.....]. Our hospital is the main resource to train our community practitioners. (director, enterprise-sponsored CHC)*

*We are trying to integrate our clinical services and preventive services. However, the preventive staff are not competent in clinical services, and in turn, the clinical staff are not competent in preventive care. Now I can only organise them as a team. If the GPs can be competent in both clinical and preventive services, that will save a lot of human resources. I hope so. (president, district hospital)*

*All the GPs were specialists before. In the community, the GPs have to be able to manage all sorts of health problems [.....]. The training should focus more on clinical components. However, social sciences are also necessary. In addition, the medical psychology is also important, because we have to enter into the families and take care of all family members for both physical problems and mental problems. (GP, hospital-sponsored CHC)*

The most urgent demands for training identified by the interviewees included: geriatrics, respiratory, vascular and heart diseases, cerebrovascular diseases, rehabilitation and mental health, and other domains in which they were inexperienced. Among those, medical ethics was also highlighted. Management of chronic conditions and preventive skills were described as one of the common shortfalls of most GPs.

*As a practitioner in the community clinics, or community station as named by the health authority, I have worked in PHC since 1994 or 96. I have been involved in providing hospitals at home services and participated in the first group of study in CHS. The period of intensive study was too short. I have to depend on self-study*



*with respect to practice. The most important thing I want to study is the management of chronic conditions. (GP, enterprise-sponsored CHC)*

*We need to provide training for GPs, especially for preventive care. Many GPs are very specialised. When people need counselling about preventive care, they can't give suggestions at all. Many of our staff are only familiar with the specialty in which they are trained. (assistant director, hospital-sponsored CHC)*

*We should firstly address the issue of medical ethics, and pay more attention to psychology [.....]. We should try to establish a good relationship between patients and doctors. I often told our staff, that the patients were our clients who came to accept services. We should treat them as our family members, even if the patients were in bad moods. But many of the medical practitioners lack such kinds of love and responsibility. (assistant director, independent CHC)*

#### Enhancing skills of working with people

A few interviewees believed that the most urgent need was to teach GPs how to work in the communities rather than clinical components. The change of environment and the pattern of working in community health made many GPs feel frustrated. Some interviewees hoped that the training courses could contribute to the improvement of the community work skills of the GPs through some specifically designed programs focusing on communication skill, teamwork skill, and the social approach to health.

*The most urgent training need is not the clinical components. We were all trained in medical sciences. But we do not know much about the society. We don't know how to coordinate and share social resources [.....]. As community practitioners working in the communities, two or three year medical training background is enough in terms of clinical skills. (director, enterprise-sponsored CHC)*

*We need training in, firstly the change of medical model; secondly the change of concept of services. All hospital staff should change the pattern of working in offices to a pattern of active working in communities. In addition, we need skills in public relations. As a joke I have said that we should employ professionals in public relations to accompany our GPs in the communities [.....]. The urgent need, I think,*

*is the social and mental aspects. For the outpatient clinics dealing with common diseases, the internists are competent. (president, district hospital)*

*It's difficult for GPs to work in communities; they have to know how to work in communities. (GP, hospital-sponsored CHC)*

### **Perceived training needs for other health professionals**

It was quite rare for the interviewees to identify training needs that were specific to community health nurses. However, some GPs hoped that nurses could contribute more to the CHS and work more actively in the communities.

A few interviewees expressed concerns about their lack of allied health professional skills, particularly in relation to rehabilitation. However, they did not seem to expect a new stream of health professionals. In the past, rehabilitation services were usually provided by medical, nursing, or public health professionals after some training. The training of allied health professional fell far behind that of other health professionals (Zhuo, D. and Kun, 1999) until recently, when some universities began to train allied health professionals targeting rehabilitation, clinical nutrition, imaging, and others.

*I feel that people are now paying more and more attention to their health, and have higher expectations. We should enhance our capacities. In the past, we only took care of acutely ill patients, without consideration of the needs of other residents. We should consider more in the future, such as rehabilitation. I want to purchase some rehabilitation equipment. We should also give suggestions to patients with chronic conditions on diet, exercises, and rehabilitation. (director, enterprise-sponsored CHC)*

### **Conclusions**

The CHS training arrangements in Chengdu and Panzhihua were similar to other regions of China. Without exception all were focused on transforming existing medical practitioners into GPs, with short-term intensive training as a predominant pattern of arrangements (Bao et al., 1999; Yu, X. H. et al., 1999; Beijing Health Bureau, 2000; Wu, X.Y. et al., 2000a; Xie, J., 2000; Xie, J. et al., 2002a). The residency training programs

for GPs had not been put in place except for some pilot trials aiming at newly graduated medical students (Zhu, S. Z. et al., 2001; Zhu, S. P. et al., 2002b).

My interviews revealed that managers and practitioners had a wide range of needs for training. The training for GPs was perceived as the most urgent demand. The majority of GP candidates were sometimes characterised as second-class specialists and individualised training was required to make up the incompetent areas of each individual trainee. This result is consistent with other studies (Wu, X.Y. et al., 2000a; Xie, J., 2000). Due to the study of different samples and the use of different survey instruments (questionnaires), the reported training demands vary somewhat. However, clinical competencies were always the major concerns of the trainees, reflecting a biomedical approach to health. Wu and colleagues (Wu, X.Y. et al., 2000a) found that the GPs did not see training on public health important despite their lack of relevant expertise. Obviously, the understandings that people had of the concept of CHS, appropriate practice patterns, and the roles of various practitioners had shaped their perceived training needs. When population health was not properly addressed, GPs would inevitably concentrate on clinical services.

## Chapter Eight

# CONCLUSIONS AND RECOMMENDATIONS

Although my study was conducted in Chengdu and Panzhihua, the results have implications at the national level. The CHS delivery model studied in Sichuan has been implemented nationwide (see Chapter Four). Many of my findings confirm other studies conducted in the other regions of China.

I started this research with three broad hypotheses: that performance problems exist in CHS; that these problems are shaped by administrative, cultural and policy structures; and that appropriate training programs, in association with interventions directed towards other determinants of performance, could contribute to the resolution of these problems.

**There are significant shortfalls in community health services which are due in part to adverse policy settings**

My findings show clearly that there are shortfalls in the performance of the CHS sector, which are associated with the gaps in the competence of the CHS workforce but also reflect a series of administrative, cultural and policy factors.

The majority of CHS programs are service-led rather than needs led. The local community needs and health problems of vulnerable populations are not properly addressed. The lack of governmental funding support and the fee-for-service mechanism provide strong incentives for community health organisations to focus on profitable services and neglect less profitable services. Distorted pricing further biases service delivery. Selling drugs has become the most important source of revenues for CHCs.

The policy makers are trying to re-channel the flow of patients, but through a strategy which involves adding more resources to the already oversupplied urban system and thus exacerbating the inefficient use of resources. The vertical control of CHS through hospital hierarchies means that their development depends heavily on institutional policies, leading to some isolation from other community resources. Poor inter-government collaboration is a great obstacle in harmonising the use of community

resources. Moreover, the diverse needs of particular localities can hardly be met through centralised controls and reliance on one particular organisational model.

The policy design of a GP-dominant CHS system stands in contrast to the poor professional preparation of the GP candidates. While communities have been encouraged to have a high expectation of GPs in leading and coordinating comprehensive and continuous services for community residents, within the health care system GPs have come to be regarded as second class doctors. They are relatively poorly educated and occupy lower positions. Meanwhile nursing, public health services and allied health services have been neglected. The role of community pharmacies in PHC has not been explored despite the fact that more than 50% of people with health needs bypass the health institutions (eg, purchasing drugs from the pharmacies)<sup>116</sup> or seek first contact help from the pharmacies.

Within the health system, there is intensive competition between providers at the same level and at different levels. Under these circumstances the sharing of information and coordination of care between individual clinicians and between organisations is uncommon.

Despite the government's efforts, consumers have not expressed due appreciation of the CHS programs. Since there is no incentive in the insurance arrangements to encourage consumers to seek medical help from CHCs and the new CHS resources duplicate rather than complement existing resources, the accessibility and effectiveness of health care has not been improved, adding little value to the urban health delivery system.

The development of CHS represents an international trend. CHS programs offer GPs an opportunity to develop long-term relationships with consumers. The CHCs also provide an infrastructure which can support the reform of the public health system which is facing significant oncoming challenges.

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<sup>116</sup> The second national health survey revealed that of those with recent health problems who did not seek help from health institutions, 88% took some drugs and 51% of these drugs were purchased from the community pharmacies (Health Information Centre, 1999).

**Further training would not lead to the changes which are needed without corresponding changes to the administrative, cultural and policy environments**

The low quality workforce is an important issue and a great obstacle to the development of CHS. But organisational incentives are also very important. Obviously, health practitioners are not always making decisions based on their academic judgements. Medical practice is in part shaped by financial incentives. The overprescription of pharmaceuticals and the neglect of checking of blood pressures by doctors at all levels and in various organisations clearly illustrate the importance of administrative, cultural and policy factors in shaping the behaviours of medical practitioners.

This does not mean that training could achieve nothing until the administrative and policy environment is changed. Actually, education could be a powerful tool in targeting the organisational change that is needed (Allery, Owen and Robling, 1997). I believe that training should aim to support community health practice but also to enhance organisational competencies for innovation and development of the existing system.

**Proposal for future development of community health services**

China has stepped out an important pace in attempting to turn the hospital-dominated delivery system into a primary care led one and is now standing at a crossroad. The future development of CHS depends largely on the policy settings and system reforms. Different scenarios could result from different policy directions.

*Scenario one: raging competition*

Under this scenario the private sector continues to grow rapidly but the CHS/private practice split continues. Although a few private facilities are officially entitled to provide CHS, most CHS remain in the government-controlled sector. As government subsidies meet only a small proportion of CHS expenditures, in effect all health facilities are virtually dependent upon success in the health care marketplace. CHS serve as a battlefield in the competition for patients. Meanwhile government control over hospitals is progressively weakened for similar reasons and medical costs continue to escalate out of control.

*Scenario two: mediocre chaos*

Both public and private medical practitioners are eligible to become GPs. Since there is no entry standard, GPs become second-class doctors. Hospitals continue to provide primary care. The health service system is still dominated by hospitals. Medical costs are left uncontrolled.

*Scenario three: PHC partnership*

All community resources are mobilised and well organised by the local government to target community priorities. CHS leadership capacity is developed to address population health. The pathway of health care is carefully designed and implemented through appropriate referral mechanisms. The functions of different providers complement each other. To shore up the first contact role of GPs, an equivalent entry standard to other medical subspecialties is maintained. The existing primary care workforce is diverted into two levels. Those who can not meet GPs' entry standard are transformed into allied health professionals. The insurance scheme provides strong policy and financial incentives to encourage consumers to take GPs as first contacts. Medical costs are controlled through the PHC system. Simultaneously, the equity and accessibility of health care are improved.

**Strategies towards real community health services**

Clearly, the third scenario represents an ideal model of CHS. Coherent policies and collective efforts from the whole society including governments at various levels, different departments of governments, various health care providers, and consumers are required to enable the development of the PHC partnership.

Re-orienting the roles of community health services

Governments need to re-develop strategies that emphasise the role of CHS in PHC. Attempting to transform all primary care personnel into GPs (Wun, Y. et al., 2000) is neither a fundamental solution to the distorted health system nor a practicable approach to PHC. If GPs become second-class doctors, the first contact roles of GPs cannot be sustained.

Even when GPs achieve high standards, PHC is better provided by a team. International experiences have demonstrated that multi-disciplinary primary care teams improve the quality of care (Davis, R. M. et al., 2000). Community nursing for example is a core part of PHC and supports the extension of hospital services into communities (Ao, 2002). Many other services such as the follow-up of patients with chronic conditions can also be done by non-medical team members (Davis, R. M. et al., 2000). China has also accumulated many successful experiences in PHC, which are built into the existing system structure and workforces (Chi, B. and Huang, 1999; Zhuo, D. and Kun, 1999; Zhuo, K. X. et al., 2000). All of these experiences demonstrated that PHC should not rely solely on any particular group of professionals or organisations.

#### Developing community health service partnerships

Improving population health will require the mobilisation of a wide range of community resources. However, this would involve different providers playing complementary roles rather than competing to deliver a narrow array of services. The community based, population approach to health care requires inter-organisational collaboration and the coordination of various resources and services. The partnership should also include non-health providers. Due to the diversity of health determinants, some critical services lie beyond the reach of the health service system (Wiener and Cuellar, 1999; Weiner, B. J. et al., 2000). However, health service organisations need to play a leading role in the partnership (Weiner, B. J. et al., 2000).

#### *Role of local governments*

CHS are commonly seen in terms of a community development model rather than a purely medical or health service model (Shediac-Rizkallah and Bone, 1998). Community governments have a great deal of authority within local communities. If CHS are to successfully implement this community development model, it is essential that community governments are fully involved and supportive (Zhuo, D. and Kun, 1999; Lu, L. Z. and Huang, 2002). Community government may serve as consumer advocate and as purchaser of services, like the social workers in relation to long-term care and the primary care trusts in the UK (Dworkin, 1997). Under such circumstances health and social services could be focused around a single point of entry at the local



level. Many commentators on PHC policy emphasise that in many respects PHC is most efficiently managed at the local level (Bullen et al., 1996; Bolland and Wilson, 1994).

Local governments should take more responsibility for local health planning. Through more effective health planning, a balance between community based services and institutional services could be achieved in a cost-effective way<sup>117</sup>. Patient's choices of health providers may also be influenced by the community assessment and planning of care (Campbell, 1998). Both public and private resources need to be taken into consideration in the planning process to try to avoid duplication of services and waste of resources. This will require coordination from the governments at higher levels and cooperation between different service providers.

#### *Role of governments and organisations beyond local levels*

Local governments may be poorly prepared to develop local health plans but there is a well developed EPS (or CDC) system with such planning expertise and large number of medical universities (177) and secondary medical schools (489) which could provide valuable technical support to local government through university-community partnership and strategic alliances (Salisbury, 1997; Shediak-Rizkallah and Bone, 1998; MOH, 2001b; Dickinson, 2002)

Universities, CDCs or even regional hospitals can work with regional governments in helping local governments in undertaking the health planning. This will enable the community activities to play a role beyond the community boundaries. For example, the aggregation of community assessment data from different localities may contribute to more rational resource allocation across a wider region (eg, using geographic information system technologies) (Plescia, Koontz and Laurent, 2001). Priorities for each community can be set according to the disparities between the communities and the norm rather than purely based on community perceptions and self-rated medical problems. This approach would also encourage a holistic approach to solving health problems through the collective efforts of all community resources and help the determination of an appropriate mix of workforces (Plescia et al., 2001).

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<sup>117</sup> Institutional services are not necessarily more expensive than community services, given the lower marginal cost of institutional services (Wiener, J. M. and Cuellar, A. E., 1999).

*Health service delivery network*

As discussed previously, achieving health improvement and better health care will need different agencies working towards shared goals and coordinating the work and functions of different providers. For example, when most primary hospitals are being encouraged to change their functions into CHCs, tertiary hospitals should not be setting up CHCs. The secondary and tertiary hospitals could develop partnerships with primary hospitals and CHCs to form a seamless two-way referral system. For example, in Harbin, there is a network organised by one tertiary hospital, with 92 organisations participating in the network. Eighty five partners in this network are primary hospitals, including enterprise-owned health institutions (Li, J. et al., 2000a). Such partnership can also provide an infrastructure for training primary care workers.

*Role of general practitioners*

GPs are the most appropriate candidate for ensuring continuity and coordination of care. They need to be recognised as high quality professionals by both consumers and other health providers. Maintaining a unified standard for training and registration of doctors is necessary to ensure a qualified workforce in CHS (Hemmes, 1994).

GPs (and other CHS workers) can also manage resources on behalf of consumers or help consumers to make appropriate decisions through providing information support. Starfield estimated that 75-85% of patients need only primary care while 10-12% require referral to secondary care, and 5-10% to tertiary care (Starfield, 1994a). Many researchers have noted that specialists tend to use more resources than GPs (Grumbach et al., 1999). Filinson (1997) argued that the GP is ideally positioned to manage the use of resources, in a manner similar to that of a care manager where clients' needs are assessed and all necessary resources and services are mobilised including and beyond locally available services. To give teeth to the role of care manager, the devolution of financial responsibility to the front line is advocated (such as fundholding in the UK) but this would not be practicable in current policy environment of China. Given the intensely competitive climate, it would be almost impossible to keep the need-led arrangement of services neutral and fair. My intention here is not to encourage the adoption of this approach so much as to stimulate a new way of thinking about the involvement of providers outside CHCs in the CHS programs.

Case management does not necessarily equate with coordination of care (Wholey et al., 1998). Some recent commentaries on case management have given primary emphasis to the cost-containment benefits (Vertrees et al., 1989; Wholey et al., 1998; Wiener and Cuellar, 1999). By contrast, the idea of coordination involves efforts to put all services in harmony (Campbell, 1998; Blackmon, 1999). In this sense, the coordinative activities involve clinical judgments as for example when the coordination is focused on an individual person who may have more than one condition and be receiving services from several agencies.

*Role of community nurses*

In delivering CHS, doctors, nurses, allied health professionals and informal carers share responsibilities (Bell et al., 1995; Hayes, 1999). Strengthening the role of community nurses and building strong working relationships between different providers including community-based nursing and hospital-based nursing is important (Edwards et al., 1999; Dong, Y., 2001b). Community nursing should also incorporate a population-centred approach based on the principles of health promotion, not merely focusing on clinical components.

*Involving the private sector: providing more choices for consumers*

In the international literature there is a critique of the use of bureaucratised public sector monopoly in the delivery of flexible personalised care plans (see for example Filinson (1997)). In many cases the private sector can provide more flexible and inexpensive services which are better suited to the client's needs. The international organisations such as the WHO and the World Bank encourage the use of private sector in primary care, but in circumstances where the quality is well controlled and efficiency is encouraged (Crossley and Abedin, 2000; Zwi, Brugha and Smith, 2001). The involvement of various resources in CHS should be regulated to aim to provide more choices for consumers. Otherwise, the unregulated market competition could possibly result in a distortion of health services (Crossley and Abedin, 2000), with more money spent on a narrow array of relatively profitable services (such as selling drugs).

*Public health doctors: more direct involvement in organising community activities*

Public health doctors (public health workers / PHWs) do not have any corresponding workforce category in Australia or in similar health systems. PHWs are part of the medical stream in China and comprise a high proportion of the CHS

workforce in many regions. According to a national survey, PHWs comprise 16.6% of the total CHS workforce (Yang, H. et al., 1999b). However, in some primary hospitals, the proportion of PHWs in the CHS workforces has reached as high as 41.5% (Li, M. C. et al., 2000b). PHWs are also required to register as medical practitioners like medical doctors, although in their case as public health doctors (Cao, G. H., 2002). Both the educational arrangements and the national examination for registration are strongly oriented to medical sciences. These arrangements provide public health doctors with some advantages in terms of CHS work. However, it would be necessary to address community-based strategies more systematically in their training if public health doctors are to adapt to the new working environment. Furthermore, modern approaches to controlling emerging health crises such as non-communicable diseases are in many respects different from the approaches adopted in the control of the traditional communicable diseases which have been the mainstay of PHW training. Some schools of public health have explored the possibility of changing the curriculum of public health education to align with the community-based approach, even converting undergraduate public health training into GP education.

*Community pharmacies: consultation and referral of patients*

Community pharmacy is an important component of the PHC system, particularly in view of the large proportion of consumers who bypass medical institutions and go to local pharmacies as their first point of contact. Since the health authorities are now trying to prevent doctors from consulting from within pharmacies (except for the traditional Chinese medical practitioners who work in herb stores), it is all the more important that the role of the pharmacist in the community should be reviewed and developed. Pharmacists play both consulting and referring roles. However, it would need to be integrated in the pharmacist registration reforms (Drug Administration Agency, 2001; China, 2001).

*Traditional Chinese medical practitioners: an important part of the CHS workforce*

Traditional Chinese medicine is an important component of CHS and PHC (Chi, B. and Huang, 1999). The philosophy and pattern of working of traditional Chinese medical practitioners is somehow analogous to those of GPs. However, with modernisation traditional Chinese medicine has become oriented around a hospital-based pattern of practice. The universities of traditional Chinese medicine should be

encouraged to innovate their training programs, shifting from being hospital based to being community based. CHS training programs should also offer opportunities for the traditional Chinese medical practitioners to upgrade their knowledge and skills and prepare for the new working environments.

*Allied health professionals: providing complementary services*

Since the urban medical workforce is clearly oversupplied, it would make sense for some of these excess medical practitioners to be transformed into allied health professionals. The development of allied health professionals would also help to prevent the production of second-class doctors. One pilot training program conducted in the WCUMS demonstrated that three-year diploma programs were suitable for allied health education<sup>118</sup>.

*Dentist: do we need primary care dentists?*

In the USA, dentistry is a separate field with its own primary care and specialty hierarchy (Barkun et al., 1993). Primary care dentistry is defined as: “*Continuing management and coordination of health services provided by a dental care provider system of first contact for maintenance of health, prevent of disease and injury, and restoration of health.*” (Barkun et al., 1993). Careful research and studies are needed to explore the feasibility of developing primary care dentists in China<sup>119</sup>.

*Role of consumers*

Consumers should be seen as partners rather than purely recipients of services. Without the support of consumers, CHS are unlikely to be successful. Community participation can enhance the sense of community ownership, and in turn, increase community capacity and make community programs more effective and more sustainable (Shediac-Rizkallah and Bone, 1998)

Consumers can play a role, not only in the decision making process but also in service delivery. Self-management strategies for chronic illness are also practicable in

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<sup>118</sup> Based on my personal conversation with the program manager.

<sup>119</sup> The research that are needed may include, for example, the role of GPs in dental services, the dentists currently available in China, and the needs and demands of dental care in communities.

China (Fu, D. B. et al., 2001; Fu, D. B. et al., 2003). Empowering consumers is crucial in achieving success in CHS (Chi, B. and Huang, 1999; Liu, C. J. et al., 1999a; Zhuo, D. and Kun, 1999). Family members, neighbours and informal carers can make significant contributions to the CHS programs. Elderly people can be taken care of by elderly (Liu, C. J. et al., 1999a). Health care can become an important component of training programs for laid-off workers.

#### Governing community health services through regulations and monitoring

When autonomy increases, accountability can hardly be secured by hierarchical supervisions. Therefore, the governments should rely more on monitoring, regulation and financial incentives embedded in funding relationships (WHO, 2001). The aligning of incentives and avoiding of conflicting signals are crucial.

#### *Changing funding mechanisms*

When governmental budgets are limited, a pluralistic funding approach needs to be encouraged. For example, many enterprise-owned medical institutions are now separating from the enterprises. Many of those institutions will be privatised without change of functions. The health service will lose an important financial resource. In the past decades, those enterprises accounted for about one third of the total health expenditure (MOH, 1999b; 2001a). Although the enterprises need to be released from the cost of providing medical services in order to compete in the market environment, the privatisation of the existing health resources is not necessarily a good solution. Changing those medical institutions to carry a larger responsibility in health promotion and health protection while still maintaining contractual relationships with the enterprises might be a better strategy. This warrants further study.

There is a consensus in China that governments should provide more financial supports to CHS. However, the existing funding mechanism needs to be reformed. Government funding should be directed preferentially towards providing services to the poor and other vulnerable populations. Mechanisms to prevent the diversion of such funding to other areas would need to be in place. Competition could also be introduced by requiring providers to compete for prepaid contracts.

*Changing accreditation/evaluation approach*

The accreditation or evaluation indicators should be set to encourage changes in the behaviours of providers that could result in better health outcomes (Baker, 1996). The GP-population ratio and other population-based indicators are useless in improving the allocative efficiency of resource use without considering other resources and the demographic characteristics of communities (Barkun et al., 1993). International experiences have demonstrated that accreditation can be individualised, and focus more on mobilisation of resources and improvement of efficiency in resources. The principles of continuous quality improvement can be used to harmonise resources, functions, and services (Quality Improvement Council, 1998, pp. 4-5; Liu, C. J. et al., 2002a).

*Personnel reform*

The implementation of personnel reform is presently cascading down through the health care hierarchy, starting in the tertiary and secondary care sector and extending progressively to the primary care sector. The implementation of personnel reform is contributing to improving the quality of human resources in the higher level organisations. However, it threatens to diminish the quality of the primary health workforce as less well trained and less well performing individuals are displaced from the tertiary and secondary care facilities and, through the power of the hospitals over the CHS, are re-invented as GPs. This could be a great threat to the development of a primary care led system. The organisational autonomy of CHS in relation to personnel arrangements needs to be ensured to ensure high quality of GPs.

Meanwhile, the reward system for individual practitioners also needs to be reformed. Volume based reward systems create perverse incentives, encouraging over-prescribing and overservicing. But performance and outcome based payment is also difficult to implement without appropriate monitoring and evaluation (Bloor and Maynard, 1998) and it could also lead to perverse incentives (Smith, J. and Simpson, 1994). We should reward best practice and encourage local initiatives and population health.

*Insurance reform*

The insurance arrangements are critical in promoting the cardinal features of primary care (Starfield et al., 1998). Not only do they influence the help seeking behaviours of consumers, but also the decision making of health care providers. Inadequate reimbursement will encourage providers to provide more services that can be easily reimbursed and focus less on those that need complex and time-consuming efforts but attracting lower reimbursements such as coordination of services (Forrest et al., 2000). In some funding systems, the insurance arrangements are used to establish “gatekeeping” and “fundholding” functions at the primary care level which may serve to encourage the first contact function and continuity of care (Forrest and Starfield, 1996). Capitation or reduced copayments can also be used to ensure the first contact function of primary care providers (Starfield and Simpson, 1993a; Bao et al., 2000a; Forrest et al., 2001). In the current policy climate, those mechanisms would not be feasible in most regions of China at the present time.

There is a need to re-examine the principles underlying the current insurance reform with a view to learning from the experience of other countries. For example, managed care in a hospital dominant health care system functions fundamentally differently as compared with a system that is already oriented to primary care (Paton, 1995). In China, cost-containment is imposed on users rather than providers. The insurance system provides no levers to regulate the behaviour of providers. Unnecessary expenditures rejected by the insurance agencies are all passed on to patients without early intervention with providers. In other words, hospitals have no accountability for cost containment. This encourages overservicing.

Variable co-payment rates have been highlighted in the most recent CHS policy document as an incentive to encourage consumers to seek more medical help from primary care providers (MOH et al., 2002). In Shanghai, patients are required to pay a lower copayment when visiting the outpatient departments of primary hospitals as compared with secondary and tertiary hospitals. This resulted in an increase in outpatient visits to the primary tier hospitals by 25% compared to the same period of the past year (Ye, L., 2002). Unfortunately, this would not be possible in cities other than Shanghai because they do not have the same supplementary insurance arrangements (Chen, Z. M., Peng and Chen, 2002b; Ye, L., 2002). In most regions, the outpatient



services are covered by the IHSAs only without any copayment mechanism. In such circumstances alternative strategies would have to be sought. If the IHSAs were restricted to covering CHCs only the first contact role of CHCs would be strengthened. As explained earlier, the availability of using IHSAs to cover medical expenses is one of the most important factors considered by Chinese people in choosing medical providers.

### **Proposal for training program innovation**

#### **Rationale of this proposal**

Before commissioning a training program, the roles and expected functions of the trainees have to be clearly defined (Hicks and Hennessy, 1999). CHS are a collective effort of a diversity of providers including doctors, nurses, and other providers and consumers. The different roles to be played by each of these providers will require different strategies of education. Obviously, China could not simply introduce the western pattern of education, since the roles of the CHS practitioners despite using the same title might be quite different. For example, nursing practitioners in the western countries may fulfil many of the functions seen as part of the doctor's role in China, such as patient examination, diagnosis and referral (Hicks and Hennessy, 1999). By contrast, GPs in China have often been involved in community education and home visits while in western countries these activities are more often done by nurses.

However, education should not focus purely on providing knowledge to support the existing range of activities of the trainees; it can also contribute to changing the trainees' practice (Allery et al., 1997). Education is one of the key instruments enabling change in practice patterns, though acting alone it is not a sufficient driver of change (Bateman et al., 1996; Allery et al., 1997).

Training programs in CHS should adopt a system-wide approach rather than merely focusing on GPs. Policy makers, health managers, local politicians, GPs, community nurses, community pharmacists, allied health professionals, paramedical practitioners all need to be trained to enhance the entire capacity of the community health system. This requires a clear vision of the inter-relationships of all of the community resources.

This proposal is based on the following concepts and assumptions.

- CHS emerge from the communities and are part of the communities.

- CHS are collective efforts of all available community resources, including consumers.
- CHS address social determinants of health and adopt a comprehensive and integrative approach.
- Building partnerships and encouraging collaborations among providers is essential.
- There is a need to change the culture of the health industry and increase the attractiveness of CHS programs.

### **Building the capacity of training providers**

As revealed in this study, training providers are not well prepared to provide appropriate training for the CHS workforce. The attitudes of training providers towards CHS are very important in shaping the cultural environments of the health industry. The academic institutions need to shoulder the responsibility of building the legitimacy of primary care and CHS as a scientifically and humanistically challenging field (Starfield and Simpson, 1993a). Internationally, both developed and developing countries have had experiences of involving universities directly in serving the communities (Bryant et al., 1993; Coile, 1994; Keck, 2002). This involvement has provided an important opportunity for the universities to understand the nature of CHS and primary care and to enhance their capabilities in delivering relevant training programs. One pilot study in China in relation to community rehabilitation demonstrated that medical universities could play important roles in establishing community partnerships and building the capacities of the communities (Chi, B. and Huang, 1999; Zhuo, D. and Kun, 1999). However, they also demonstrated that fragmented specialised services which do not reach the community levels are unlikely to produce maximum benefits for consumers unless they are linked with community based primary care services, but that community-based programs alone are also not enough to meet all of the needs of consumers. Referral services are also necessary (Mitchell, 1999). Unfortunately, the high status universities have commonly ignored the training of GPs, leaving this task to the local

medical schools<sup>120</sup>. This forms a sharp contrast with many western countries. For example, only 15% (27) of US medical schools do not have a department of family medicine (Starfield and Simpson, 1993a). Although some of the high status universities in China are very active in CHS research, most of these research focus on policy issues rather than on service delivery. Without the participation of the CHS providers, such research is unlikely to provide realistic support to the practice of CHS. The involvement of medical academics in CHS training and research programs must not be oriented to their own needs for professional advancement. The CHS programs need to be always driven by the needs of the communities to enable the sustainability of these programs (Shediac-Rizkallah and Bone, 1998).

Currently, most CHS training centres were set up in medical universities and colleges. However, hospitals and CHCs have been assumed to be the main settings for providing residency training for GPs. In the entire four-year residency training program for GPs, 33 months were to be spent in hospitals and 12 months in CHCs (MOH, 1999c). However, the MOH has established a set of criteria to evaluate the eligibility of hospitals in providing residency training. The capabilities of these training bases needed to be enhanced (MOH, 2002a), especially for the new emerging streams such as GPs.

Community nursing training remains a challenging field for educational providers. Traditionally, nurses have obtained poorer education than the medical professionals and many training courses have been designed and offered by teachers with medical backgrounds rather than nursing backgrounds. The teachers with expertise in community nursing were extremely sparse. For example, when I was working in a Chinese medical university, the department of preventive medicine was appointed to teach community nursing. But actually, none of the staff in this department had any training or research experience in community nursing.

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<sup>120</sup> In China, universities can be sponsored by the national government or by the provincial governments. There are also a few universities that get extra supports from the national government. They enjoy very high privileges and are classified as key universities.

## Training Arrangements

### Design curricula around consumers' needs

Training curricula can be designed around the trainees' needs for professional development based on the theoretical requirements from a scientific view; they can be based on the identification of the gaps between the providers' competencies and standardised requirements; or they can be based on consumers' needs. The first approach is ideal for a novel program. It provides a clear description of the roles of a professional and forms a foundation for assessment of the competency of relevant professionals. An example is the various practice guidelines produced by the professional associations. The MOH training requirements for GPs can be put into this category. The second approach is tailored to the needs of providers and offers practicable training for the providers aiming at enhancing their capacities in delivering services. This is encouraged by the MOH as a main guideline for the in-service training of GPs, where the majority of candidates have rich experiences in hospitals but not in community settings. Both of these approaches are less innovative and contained strictly within the existing boundaries of the specific professions. However, without linkage and coordination between the training programs for different professionals, the services are unlikely to be well coordinated. Both overlaps in training (directed towards competition for highly valued or profitable services) and gaps (relating to areas which all professions wish to avoid) are inevitable. In such circumstances consumers are not in a position to make decisions on what and where to get the help they need. The third approach, which builds training around consumers' needs, is not specific to any one professional group. For example, the care of mothers with gestational diabetes could have multiple objectives: safe delivery of the baby, ensuring a healthy baby and healthy mother, and prevention of the development of type two diabetes for mothers with gestational diabetes and their offspring. Such complex care requires the collaboration of various health providers, including medical practitioners, PHWs, and nurses, and appropriate sharing of responsibilities. A training program designed around the needs of consumers can provide opportunities for the providers to communicate with each other and to improve the coordination of services.

### Encourage communications among trainees

Professional boundaries are constantly changing as new problems arise, new technologies are introduced, and particularly when new professional streams emerge. The most important principle during the territorial disputes which follow is that professional interests do not prevail over those of the consumers (Kirk and Glendinning, 1998). Training programs should provide various trainees with opportunities to communicate with each other and to develop a shared vision of consumers' needs. Training based on consumers' needs will involve common themes in which several trainee groups will have an interest. The themes that are common to some providers can be taught in a shared environment. At least one workshop could be organised for all providers in relation to a particular health issue.

### Personalised in-service training programs

In-service training directed to transforming hospital doctors into GPs seems to be the only way of providing training currently used. Personalised continuing medical training is more suitable with regard to clinical competency, which is seen as a top priority in the current situation of GPs all coming from diverse backgrounds. Sambandan (1995) has proposed a portfolio based learning approach, where individual learner collects experiential evidence to facilitate the designing of future learning activities.

### Introduce community based courses in undergraduate education

In many western countries, residency training is an essential step directing medical graduates to various subspecialties, including GPs (Australian Medical Council, 2003). Clearly, there is also a need for further study and evaluation of the feasibility of implementing GP training in undergraduate programs. There is no doubt that incorporating some community health practice experience into undergraduate training is necessary. In some countries, such as the UK, some hospital-based courses are being changed to incorporate more community-based training (Murray, E., Jolly and Modell, 1997; Lennox and Petersen, 1998; O'Sullivan, Martin and Murray, 2000). Godfrey has called for a greater emphasis on primary care and less on high-technology in medical curricula (Barkun et al., 1993). Community based medical education reflects the

“primary care led” idea. In the UK, half of medical schools had some primary care inputs into clinical teaching (Murray, E. et al., 1997). The community-based courses proved to be valuable in providing students with insights into social and psychological issues; increasing their awareness of the patient’s autonomy, and improving their communication skills and understanding of human behaviour. It was also highly appreciated by the students in terms of clinical skill acquisition (Hartley et al., 1998; Lennox and Petersen, 1998; O’Sullivan et al., 2000). The objective structured clinical examinations demonstrated that students could learn clinical skills in community setting as well as in hospitals (Murray, E. et al., 1997). The community-based course is of particular importance in view of the medical registration system in China, which does not require GPs to be examined and assessed separately. In this circumstance community-based education might be expected to contribute to cultural change in the health industry and to increase the interests of medical graduates in CHS. It would also serve as a powerful instrument to enhance the capacities of the universities to undertake teaching and research in CHS.

### **Training themes**

The proposed training themes outlined below are not assembled under specific professional groups. As discussed previously, the CHS training programs should cover policy makers and managers, health administrators, GPs, nurses, allied health professionals, and PHWs. Many key issues to be addressed are not exclusive to one particular category of trainees. In fact, many of these issues are problems of system mechanisms rather than tied to the performance of any one group of providers. Appropriate overlaps in arranging these training components among different categories of trainees would be beneficial. It would also help to encourage communication and collaborations between various providers and maximise the contribution of the training programs to the improvement of health service delivery systems. However, this does not mean that each theme is equally important (or relevant) for different categories of trainees.

### **Community mobilisation and social marketing**

The broad aims of this theme are to help both managers and community health practitioners to understand that the goals of CHS cannot be achieved by health care

providers working alone and that creating coalitions with others including individuals, organisational representatives, and local officials is critical (see Chapter Six for further discussion). CHS managers and practitioners should be able to apply basic principles from community mobilisation and social marketing to the development of CHS programs.

Community mobilisation refers to the organisation of community members through the activation of the CHCs for the purpose of developing and implementing action programs targeting the local health problems (Treno and Holder, 1997). Community mobilisation can be used to reduce local health problems through establishing coalitions and obtaining supports (Treno and Holder, 1997), as well as to increase the awareness of consumers about the needs of CHS (Zhang, A. Y., 1999a). Strategies for community mobilisation include media advocacy activities and community organisation (Treno and Holder, 1997). China has done a lot of media advocacy activities, but they were not necessarily directed to the concerns that were most relevant to the consumers. Community participation is an essential aspect of community organising (Zhang, A. Y., 1999a).

Social marketing is “*the use of marketing principles and techniques*” to “*influence an audience to change their behaviour for the sake of improving health, preventing injuries, protecting the environment, or contributing to the community*” (Kotler, Roberto and Lee, 2002, p. 5). It can also be used as a strategy to encourage the acceptance, participation and cooperation of consumers (Zhang, A. Y., 1999a; Yan, 2000).

### Empower consumers

Consumer participation is a widely accepted principle in CHS. Previously, I suggested an approach through the community governments to facilitate the participation of consumers. Doctors and nurses can also play a role in encouraging participation through the empowerment strategy. Consumers could be empowered in making decisions and even directly performing the clinical procedures (Kirk and Glendinning, 1998). Empowerment has been affirmed as a powerful strategy that assists community residents to gain control over their own lives and adapt to changed environments after trauma (Man, 1999). However, the lack of autonomy in nursing practice due to the close attachment of nurses to GPs could inhibit the introduction of this kind of participative approach to care (Kirk and Glendinning, 1998). Moreover,

nurses could possibly feel threatened by the participative approach. Accordingly, the nursing training should emphasis not only the direct delivery of services but also the supportive roles of nurses in areas such as patient/carer education, service coordination, and technical supports.

### Community health service management

Given the specific features and functions of PHC and CHS, policy makers and managers need to pay particular attention to the following aspects of management. Those aspects target the main performance problems of CHS identified in this research, including poor response to population health, inefficient use of resources, poor quality of medical services, and lack of coordination and continuity of care (see Chapter Five for further detail).

### *Managing cooperation and competition*

Building partnership is important in responding to the local health needs but it is by no means a straightforward task. It can be very difficult to bring together professionals all of whom have a strong sense of personal and professional autonomy (Bell et al., 1995). Ideally CHS would be organised and coordinated around consumers' interests. But there exists a big debate on whether to cultivate and manage competition or whether to aspire to cooperation and whether the two could co-exist. Some people believe that competition is in the nature of human beings (Coile, 1994); others argue that collaboration is crucial in building a consumer-centred system (Bentley et al., 1994). Coile (1994) has argued that the downside of managed competition includes the regulatory costs which add to the expense of that model. Sachs (1994) has argued that competition is unavoidable since all stakeholders would always act in their own interests; it should therefore be accepted, harnessed and managed. Obviously, encouraging and promoting the harmony of service providers while still maintaining competition is a great challenge to contemporary health service managers (Rice, 1994). China has already developed some forms of partnerships, such as hospital-hospital, public facility-private services, and community pharmacies-physicians, but these partnerships are generally not oriented to the community needs. Although business sharing may have been the original purpose of such cooperation, they can still be used as a hub for CHS (Stuart and Weinrich, 2001).



*Information management*

As discussed in Chapter Five, information sharing is essential in enabling continuity and coordination of care, core features of primary care. Computerised information systems provide a powerful capacity to assure the quality and efficiency of services in this respect (Wang, X. H. and Guo, 2002). For example, by 1995 almost 90% of GPs in the UK had been computerised, with 55% being able to access to clinical data during consultations (Sullivan and Mitchell, 1995). In the USA, computing is seen as an essential technology in healthcare industry (Sullivan and Mitchell, 1995). However, computer system cannot be effective in promoting the quality of services unless it is designed around the needs of users. The development of CHS information system in China is currently focusing on the collection of data. The situation in this respect in most regions of China is similar to that documented in this thesis (Chinese People's Political Consultative Conference, 1998; Li, P. X. et al., 1999a). There are no uniform standards to ensure the quality of data. Data are rarely analysed and are rarely used for making decisions. Regional governments should take responsibility of developing CHS information systems if centralised information processing is to be used to support community assessment and regional allocation of resources.

*Managing quality of services*

Quality of services is a joint concern of managers, providers and consumers. The underpinning factors involve a wide range of issues, including system arrangements, providers' competency, and consumers' attitudes and compliance. The policy makers and managers have to be cautious in developing policies and evaluative programs and try to avoid perverse incentives. Health managers should be encouraged to shift their attention from purely allocating resources to efficient and effective use of resources.

Several quality issues in medical care need to be addressed such as overprescribing, frequently use of intravenous drips, neglect of low profit but cost-effective services such as blood pressure measuring, and lack of continuity and coordination of care (see Chapter Five for further detail). CHS managers and practitioners need to understand the principles of CQI (see Chapter Six for further discussion).

*Managing resources and programs*

Health care managers need to learn how to manage resources (including financial and human resources) and programs under a range of different and changing circumstances.

CHS depend on team-work, with GPs playing a leading role in this team. In terms of the use of resources, GPs are thought to be less expensive than specialists because they deploy fewer resource intensive procedures (Grumbach et al., 1999; Selby et al., 1999). However, there is no benchmark for the appropriate proportion of GPs nor for the ideal mix of medical specialists generally (Starfield and Simpson, 1993a). The policy requirement for CHS staffing mix is not necessarily adequate (see Chapter Four for details).

Service delivery in communities

Managers, GPs and nurses need to learn how to organise and deliver services in communities so that the impact of the CHS programs on local population health could be maximised.

*Community assessments*

As documented in Chapter Four and Chapter Five, the inability of CHCs of undertaking community diagnosis has become a key barrier for planning community activities oriented to local needs. It has also caused waste of resource input (eg, community survey) and formed an obstacle for getting support from consumers.

Community needs assessment has long been one of the training components for community nursing (Billings and Cowley, 1995; Edwards et al., 1999). These assessments are even more important when the priority problems have been identified because they can provide valuable information about how to approach the target populations and how to organise activities (Li, L. M., 1999).

*Health promotion*

The health promotion approach encourages community practitioners to adopt a social approach to prevention (Gu, J. R., 2002). It requires collaboration between

various service providers (even beyond the health industry) and the mobilisation of a range of existing community resources. The principles of health promotion can guide the design of consumer oriented and needs based training curricula, which target community priorities and involve strategies worked out jointly by consumers and service providers.

Health education and health promotion are included in the Regulation on the Management of Nurses (MOH, 1993b). However, managers and GPs need to extend their role from health education to health promotion (see Chapter Four for detail) and take a leading role in planning community activities guided by the principles of health promotion: “advocate, enable, and mediate” (WHO, 1986).

### *Family practice*

The CHS practitioners have been aware of the importance of treating their clients in the context of the family, a basic unit of communities. But current training arrangements have neglected this important component.

GPs and nurses need to learn how to deliver family oriented health care. Obviously, the family is not a homogeneous unit but a network of dyads, alliances, and subsets (Buckingham et al., 1988, p. 5). Family oriented health care embodies broad approach to clinical problems and a whole person approach to health and health care and a strong emphasis on physician-client-family relationship (Buckingham et al., 1988, p. 3). The family life cycle is commonly used as a framework in helping organising family-centred health care (Buckingham et al., 1988, pp. 28-34).

### *Case management*

As documented in this research, some consumers have begun to demand services similar to case management (see details in Chapter Five). The systematic management of public health issues needs to be further developed and tailored to individual needs. Case managers could be drawn from GPs, nurses, or other providers. They serve as a central contact point and advocate for patients. Their task is to ensure that the services provided are the most appropriate for the patients they serve.

*Support informal carers*

The quality of nursing services in communities was seen by the interviewees as comparable to that of hospitals. But community health nursing is much broader than hospital nursing; it includes but goes well beyond acute episode-based clinical care. The work of community nurses is (or should be) oriented around the shared needs of communities, of families and of individuals in the context of their on-going life, work and relationships, not just the episode of acute care.

In the UK, community care is described as a partnership with users and care providers (Filinson, 1997). Theoretically, the professional providers and informal carers should support each other (Hayes, 1999) and nurses should be able to support informal carers (Kirk and Glendinning, 1998). As shown in my study, lay care is quite common in China. But few informal carers are actively supported by nurses or other health professionals (Pi, 2002). There lacks a link between the professional providers and informal carers. A study in China proved that non-medical workers can undertake many community care activities with appropriate training and supports from the professional providers (Zhuo, D. and Kun, 1999). Self-care and informal care are of course not a substitute for professional care activities (Mitchell, 1999)

*Improving clinical competency of general practitioners*

There is a huge need for GP training. According to the plan of the MOH, more than 30% of the health care workforce will be allocated to community settings, and the GPs are expected to comprise at least a third of the health care practitioners working in the communities by the year of 2015 (MOH, 2002d). Although the anticipated proportion of GPs is lower than that in many western countries (eg, in the USA where 40% of doctors are non-specialists (Peabody and Luck, 1998); 50% in Canada; 70% in UK (Starfield, 1994a)), it is still a big challenge for the training providers because of the huge number of candidates who are going to enter into the training programs in the coming decade and the relatively poor educational backgrounds of many of these potential trainees (Lang and Li, 2002).

The training of GPs should not involve producing second-class doctors. GPs should have a different scope of expertise and skills compared to other subspecialties. They should be able to deal with a wide range of health problems appropriately and provide

continuous and coordinated care for community residents. Preventive principles should guide the practices of GPs. Primary and secondary prevention has been widely accepted by medical practitioners as part of their practice in China. When allied health professionals are not available, rehabilitation could become another component of the training for GPs. These training curricula should cover techniques of disability prevention, early detection, and the management of disability and chronic pain (Kim and Jo, 1999).

Given the diverse backgrounds of GP candidates, the clinical training should be tailored to individual needs and adopt a life-long ongoing learning process. However, several common themes need to be addressed drawn upon the findings of this thesis.

#### *Communication skill*

Effective communication is vital in maintaining good provider-consumer relationships, improving patients' compliance, and dealing with social events that could have an adverse impact on people's health such as family tensions. Communication skill is particularly critical in primary care when a long-term relationship between providers and consumers is to be maintained. In the gate-keeping arrangements of some western countries, the dissatisfaction of consumers with their regular providers is often associated with the stronger preference for self-referrals (Forrest et al., 2001). Indeed, patients quite often raise the issue of referral (Forrest et al., 2001; Forrest et al., 2002). CHS practitioners need more training in communication and negotiation skills, especially when they are required to take on the role of care managers.

GPs also need to communicate with other providers to ensure the continuity and coordination of care for their patients.

#### *Appropriate referrals*

Appropriate referrals should be an important theme of the training for GPs, since primary care can achieve better health outcomes when linked to specialist services properly (Starfield and Simpson, 1993a). Forrest (1999a) suggested that training to increase competence of GPs may be most useful when focusing on the most commonly referred conditions. Obviously, it is a big challenge for the educators to teach the GPs when to tolerate clinical uncertainties, when to refer a patient to a specialist, and which

type of specialist the patient should be referred to (Forrest et al., 1999a; Forrest et al., 2002).

### Other themes

There are also many other themes that are also important for improving the CHS performance and health outcomes. For example, the health providers need to be more aware of the privacy of their patients and other ethical issues. They also need to gain skills of life-long learning. When training resources are not available, they need to be able to update their knowledge and skills through self-studies and undertake evidence-based practice. Given the strong biomedical approach in medical education, social and behavioural science should be one of the priorities in the CHS training programs.

### **Implications of this research at a broader level**

Although this study was undertaken in China, there are some implications for other countries and for CHS in general. Primary health care needs to be seen as part of system reform, not purely institutional or sectoral development. No single institution is able to meet all of the needs of consumers. The key issue is how to align the services of various kinds to a uniform primary health care aim through building partnerships. Recognising GPs as key players in CHS does not necessarily lead to an automatic change in their pattern of work, shifting from individual focused to population focused. There is a need to close the gap between medical and public health services, which will require ongoing efforts of educators, providers and consumers.

### **Last words and next steps**

Developing CHS is one of the top priorities of urban health reforms in China. In my study, I aimed to develop appropriate strategies for CHS workforce development through documenting policy, administrative and institutional arrangements of the CHS programs, identifying performance problems, and analysing relevant determinants underpinning the practices and performance of CHS.

The findings of this research have implications for both policy development and training. The development of CHS needs to be considered as a system change rather than in terms of institutional developments. Other reforms such as insurance, human

resources, and the role of community pharmacies have to be aligned with the overarching goal of promoting people's health. I have proposed possible directions for the CHS reform, particularly for the CHS workforce development.

Obviously, there exist many uncertainties regarding the future development of CHS. Further research would be needed to evaluate what I have proposed in this study.

There are some limitations of this study. My study was conducted in Sichuan. Although many of my findings are consistent with other studies conducted elsewhere, the diverse characteristics of different regions of China have profound impacts on the feasibilities of these strategies. A significant example is the insurance arrangement. While copayment could serve as an instrument to encourage consumers to seek medical help from CHCs in Shanghai, it would not be effective in Chengdu, Panzhihua, and many other cities in China. In these cities, a restriction of the use of the IHSA to CHS might have a comparable effect. My conclusions are based on the particularities of policy contexts in Chengdu and Panzhihua. Those conclusions are not necessarily applicable to other regions where the policy contexts are different.

The questionnaire survey of consumers was not based on a completely random sample. Therefore, the findings of this survey should not be generalised to the wider population. The sample size was also limited due to resource restrictions (including the unavailability of relevant data), which precluded making risk-adjusted comparisons between the quality of services provided by CHCs and by other health providers.

The household questionnaire survey covered all of the members of selected households. Although precautions were taken to avoid influences between those household members (they were surveyed independently and simultaneously), there still exists a convergent tendency in terms of the attitudes of the same household members towards CHS.

## **Appendix A. Questionnaire**

### **Survey on health needs and use pattern of health services**

Dear residents:

We are students from the West China University of Medical Sciences. We are conducting a collaborative project with Chengdu Health Bureau and La Trobe University, focusing on the health needs and use of health services of community residents. We would like to ask you some questions about your health problems, your use of health services, and your evaluation on the health services you received. It will take you about 20 minutes. We will not record your name and address in the survey. The questionnaire will be stored in our university securely. The results of the project will appear in thesis, in journal publications, and in presentations at conference, but you will not be able to be identified in any of these reports.

You will not benefit from the project directly. However, your participation will provide us with information to develop training programs for general practitioners and to improve the health services.

You have the right to refuse to participate in the project or withdraw at any time. There will not be any consequences if you choose not to participate in or withdraw from any parts of the study.

Is it OK to go ahead now with my questions?

Reference No. \_\_\_\_\_

Community: \_\_\_\_\_

Sex: ☐ Male

☐ Female

**First, I would like to ask you some questions relevant to the risk of your health.**

1. How often do you smoke?

☐ occasionally;

☐ daily;

☐ have quit;

☐ never;



2. How often do you drink alcohol?
- ☐ never;
  - ☐ less than once a week;
  - ☐ 1 or 2 days a week;
  - ☐ 3 or 4 days a week;
  - ☐ 5 or 6 days a week;
  - ☐ everyday;
3. Your Weight (Kg) \_\_\_\_\_
4. Your Height (m) \_\_\_\_\_
5. Do you participate in exercise other than your regular job and household duties?
- ☐ yes, often (please specify \_\_\_\_\_ )
  - ☐ yes, occasionally (please specify \_\_\_\_\_ )
  - ☐ no, rarely;
  - ☐ never
6. Do you engage in vigorous activity, apart from exercise, which makes you breathe harder or puff and pant at work or household duties?
- ☐ yes, often
  - ☐ yes, occasionally
  - ☐ no, rarely;
  - ☐ never

**The next questions are about your use of health services during the recent six months:**

7. Have you attended a doctor during the last six months?
- ☐ Yes (please go to question 8)
  - ☐ No (please go to question 21)

**If you have ever seen doctors during the recent six months, please recall your most recent visit to doctors, and answer question 8 to 20.**

<p>8. Where did you go to see the doctor?</p> <p><input type="checkbox"/> hospital;</p> <p><input type="checkbox"/> community health centre/station;</p> <p><input type="checkbox"/> private clinic</p> <p><input type="checkbox"/> other (please specify _____ )</p>
<p>9. What organisation did the doctor work for?</p> <p><input type="checkbox"/> street;</p> <p><input type="checkbox"/> district;</p> <p><input type="checkbox"/> municipal;</p> <p><input type="checkbox"/> provincial;</p> <p><input type="checkbox"/> private clinics</p> <p><input type="checkbox"/> other (please specify: _____ )</p>
<p>10. What's the specialty of the doctor?</p> <p><input type="checkbox"/> general practice;</p> <p><input type="checkbox"/> general internal medicine;</p> <p><input type="checkbox"/> general pediatrics;</p> <p><input type="checkbox"/> gynaecology and obstetrics;</p> <p><input type="checkbox"/> others (please specify _____ )</p>
<p>11. What's the main reason of your visit?</p> <p><input type="checkbox"/> to diagnose and treat my illness (please specify your illness or symptoms _____ );</p> <p><input type="checkbox"/> to prescribe medicine for my diagnosed disease (please specify your illness _____ );</p> <p><input type="checkbox"/> to take a physical examination;</p> <p><input type="checkbox"/> to consult with doctor about my problems;</p> <p><input type="checkbox"/> to take therapy or/and rehabilitation;</p> <p><input type="checkbox"/> to prevent disease;</p> <p><input type="checkbox"/> others (please describe: _____ )</p>

<p>12. Was your health problem severe?</p> <p><input type="checkbox"/> no, not severe;</p> <p><input type="checkbox"/> yes, moderately severe;</p> <p><input type="checkbox"/> yes, very severe</p> <p>please explain:</p>		
<p>13. Did a doctor from somewhere else send you to this clinic?</p> <p><input type="checkbox"/> yes;</p> <p><input type="checkbox"/> no;</p>		
<p>14. Have you sought medical advice for the problem before this visit?</p> <p><input type="checkbox"/> yes;</p> <p><input type="checkbox"/> no;</p>		
<p>15. Did you receive any of the following services?</p>	<p>Yes</p>	<p>No</p>
record my problems in medical records or health files	<input type="radio"/>	<input type="radio"/>
take physical examination	<input type="radio"/>	<input type="radio"/>
measure blood pressure	<input type="radio"/>	<input type="radio"/>
order laboratory test	<input type="radio"/>	<input type="radio"/>
order equipment examination	<input type="radio"/>	<input type="radio"/>
prescribe antibiotics	<input type="radio"/>	<input type="radio"/>
prescribe other medicine	<input type="radio"/>	<input type="radio"/>
explain the causes of problem	<input type="radio"/>	<input type="radio"/>
give advice about ways to avoid illness and stay healthy	<input type="radio"/>	<input type="radio"/>
refer me to other medical specialist	<input type="radio"/>	<input type="radio"/>
make appoint with me for the next visit	<input type="radio"/>	<input type="radio"/>
give family planning service	<input type="radio"/>	<input type="radio"/>
plan functional rehabilitation schedule	<input type="radio"/>	<input type="radio"/>
give counselling to work, study, or family problems	<input type="radio"/>	<input type="radio"/>
explain how to use the medicine	<input type="radio"/>	<input type="radio"/>
explain the side effect of the medicine	<input type="radio"/>	<input type="radio"/>
give vaccine	<input type="radio"/>	<input type="radio"/>
others (please specify )	<input type="radio"/>	<input type="radio"/>

<p>16. Were there other services you needed but did not receive?</p> <p><input type="checkbox"/> yes, there definitely were (please specify _____ )</p> <p><input type="checkbox"/> yes, I think there were (please specify _____ )</p> <p><input type="checkbox"/> no, I don't think there were</p> <p><input type="checkbox"/> no, there definitely were not</p>
<p>17. Were there any services you did not want but have received?</p> <p><input type="checkbox"/> yes, there definitely were (please specify _____ )</p> <p><input type="checkbox"/> yes, I think there were (please specify _____ )</p> <p><input type="checkbox"/> no, I don't think there were</p> <p><input type="checkbox"/> no, there definitely were not</p>
<p>18. How satisfied were you with the technical quality of the doctor?</p> <p><input type="checkbox"/> quite dissatisfied;</p> <p><input type="checkbox"/> indifferent</p> <p><input type="checkbox"/> basically satisfied;</p> <p><input type="checkbox"/> mostly satisfied;</p> <p><input type="checkbox"/> very satisfied;</p> <p>Please explain:</p>
<p>19. How satisfied were you with the service manner of the doctor?</p> <p><input type="checkbox"/> quite dissatisfied;</p> <p><input type="checkbox"/> indifferent</p> <p><input type="checkbox"/> basically satisfied;</p> <p><input type="checkbox"/> mostly satisfied;</p> <p><input type="checkbox"/> very satisfied;</p> <p>Please explain:</p>

20. Do you agree with the following statements?	Yes	No
I have to wait for quite a long time at doctor's office	<input type="radio"/>	<input type="radio"/>
the doctor listened to me patiently	<input type="radio"/>	<input type="radio"/>
the doctor examined me thoroughly	<input type="radio"/>	<input type="radio"/>
the doctor was experienced with my health problem	<input type="radio"/>	<input type="radio"/>
I was not convinced that the doctor's diagnosis was correct	<input type="radio"/>	<input type="radio"/>
I could hardly understand what the doctor explained to me	<input type="radio"/>	<input type="radio"/>
the doctor respected me	<input type="radio"/>	<input type="radio"/>
the doctor should pay more attention to my privacy	<input type="radio"/>	<input type="radio"/>
the doctor spent plenty time with me	<input type="radio"/>	<input type="radio"/>
the cost of my medical visit was too expensive	<input type="radio"/>	<input type="radio"/>

**If you haven't attended a doctor during the recent six months, please answer question 21 to 23**

21. Have you experienced any symptoms or health problems during the last six months?		
<input type="checkbox"/> No (if not please go to question 24)		
<input type="checkbox"/> Yes		
22. What were the symptoms or health problems?		
<hr/>		
23. Why didn't you attend a doctor?	yes	no
illness was not severe;	<input type="radio"/>	<input type="radio"/>
illness can be self-treated;	<input type="radio"/>	<input type="radio"/>
doctor is not competent;	<input type="radio"/>	<input type="radio"/>
illness is not curable;	<input type="radio"/>	<input type="radio"/>
financial difficulty;	<input type="radio"/>	<input type="radio"/>
distance problem;	<input type="radio"/>	<input type="radio"/>
too crowded in health institutions;	<input type="radio"/>	<input type="radio"/>
too busy to see doctors;	<input type="radio"/>	<input type="radio"/>
others (please specify );	<input type="radio"/>	<input type="radio"/>

24. Have you ever been diagnosed with any chronic conditions?

☐ no;

☐ yes



24.1 What are the conditions?

25. Are there any community health services in your community?

☐ yes;

☐ no;

☐ don't know

26. Do you think it necessary to develop community health services in your community?

☐ yes;

☐ no;

☐ don't care

27. When you encountered health problems, would you like to seek medical advice from the community health institution before you take further steps?

☐ yes;

☐ not sure;

☐ no;

28. What are the most important possible factors that might encourage you to see doctor in community health institution?

	yes	no
short distance	<input type="radio"/>	<input type="radio"/>
low financial burden	<input type="radio"/>	<input type="radio"/>
can access at any time	<input type="radio"/>	<input type="radio"/>
high technical quality	<input type="radio"/>	<input type="radio"/>
good service manner	<input type="radio"/>	<input type="radio"/>
continuity of service	<input type="radio"/>	<input type="radio"/>
good personal relationship	<input type="radio"/>	<input type="radio"/>
keep privacy	<input type="radio"/>	<input type="radio"/>
high reimbursement in insurance	<input type="radio"/>	<input type="radio"/>
other (please specify )	<input type="radio"/>	<input type="radio"/>

29. What are the most important possible factors that might block you from seeing doctor in community health institution?

	yes	no
long distance	<input type="radio"/>	<input type="radio"/>
high financial burden	<input type="radio"/>	<input type="radio"/>
can not access at some time	<input type="radio"/>	<input type="radio"/>
poor technical quality	<input type="radio"/>	<input type="radio"/>
bad service manner	<input type="radio"/>	<input type="radio"/>
lack of continuity of service	<input type="radio"/>	<input type="radio"/>
bad personal relationship	<input type="radio"/>	<input type="radio"/>
difficulty to keep privacy	<input type="radio"/>	<input type="radio"/>
difficulty in reimbursement in insurance scheme	<input type="radio"/>	<input type="radio"/>
other (please specify )	<input type="radio"/>	<input type="radio"/>

30. There are a lot of debates about what kinds of services that community health institutions should provide. How do you rate the appropriateness of the following services as components of community health services?

	very appropriate	a little bit appropriate	don't care	not fairly appropriate	not appropriate
preventive service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
counselling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
diagnose common disease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
prescribe medicine for diagnosed disease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
rehabilitative service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
aged care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
maternal care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
child care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
family planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
palliative care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
health education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
others (please specify )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Finally, I will ask some general information about you.**

31. Date of birth        /        /        (e.g. 15/Sep./1965)

32. Current occupation

- ☐ retired;
- ☐ unemployed;
- ☐ worker;
- ☐ cadre;
- ☐ professional;
- ☐ manager;
- ☐ child or student;
- ☐ others (please specify        )

33. Current employment

- ☐ no employer;
- ☐ state-owned enterprises;
- ☐ governmental agency;
- ☐ non state-owned enterprises;
- ☐ others (please specify        )

34. Highest educational level

- ☐ never attended school;
- ☐ primary school;
- ☐ some high school;
- ☐ completed high school;
- ☐ university or other tertiary institution;

35. Marital status

- ☐ never married;
- ☐ now married;
- ☐ widowed;
- ☐ divorced;



36. Medical insurance type
- ☐ no medical insurance;
  - ☐ laborer health insurance;
  - ☐ government employees health insurance scheme;
  - ☐ individual account and social pool;
  - ☐ commercial medical insurance;
37. Average monthly income per capita at a family basis (Yuan RMB)
- ☐  $\leq 150$ ;
  - ☐ 151-299;
  - ☐  $\geq 300$ ;
38. Number of family members (Persons) \_\_\_\_\_
39. Family type (judged by interviewers)
- ☐ core (parent with unmarried children);
  - ☐ others (please specify \_\_\_\_\_);
40. Have you signed health care contract with health institutions?
- ☐ No      ☐ Yes
- └─>
- With which level of institution?

  - ☐ Street or below
  - ☐ District
  - ☐ Municipal
  - ☐ Provincial
  - ☐ Other (please specify: \_\_\_\_\_)

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**Interviewers use only**

Did the respondent complete the questionnaire for himself or herself?

- ☐ yes      ☐ no

└─> What is the relationship of the proxy with selected respondent?

- ☐ Father      ☐ Mother      ☐ Other (please specify \_\_\_\_\_)

Reason for proxy answer?

- ☐ younger than 18
- ☐ selected respondent was unable to answer questions
- ☐ other (please specify \_\_\_\_\_)

## **Appendix B. Interview Guidelines**

### **For Health Administrators**

1. How is your community health service established?
  - Could you please tell me what your “community health service” looks like?
  - What is the administrative structure for the managing of community health services?
  - What is the administrative structure for the delivering of community health services?
  - Who work in the community health service centre?
  - What are the key elements in your community health services?
  - How do you organise community health services?
2. How would you rate the performance of the community health services provided in your jurisdiction or by your hospital?
  - What are the strength of this program?
  - If other people from other cities come to see your community health services, what aspects of your program was what you most want to present?
  - Are there any weakness in this program? (please specify)
  - What are the frustrations for you of working in this program?
  - How are the qualities of other aspects of the performance of community health services in your hospital?

How do you provide for easy access services in terms of time?

How do you provide for easy access services in terms of distance?

How do you provide for easy access services in terms of financial burden?

To what extent do community residents know your services?

Do individuals in your contract communities identify your hospital as their regular source of care and use it as such over a period of time?

How do you keep trace of the health problems of residents in your contract communities?

How do you coordinate services provided by different providers?

How do the patients rate your community health services?
3. How do your rate the quality of GPs?
  - How is about the competence of your GPs?

- How do you assess your GPs' performance?
4. How do clients choose health providers?
    - Who choose community health centre/station as the main primary health care providers?
    - How do they make the choice?
    - Why do they make the choice?
  5. What's the influence of community health services on your hospital?
    - What are the relationships between the community health services and other services delivered in the hospitals?
    - What's the influence of community health services on hospital performance?
      - How's about the influence on service capacity?
      - How's about the influence on revenue?
      - How's about the influence on administrative system?
  6. How do you think of the importance of community health service?
    - How do GPs think about the importance of community health services?
    - How do other staff think about the importance of community health services?
  7. What is GP's role in delivering community health services?
    - What are the main services do GPs deliver?
    - Do GPs deliver the following six aspects of services? (preventive services; health education; disease treatment; rehabilitation; maternal & child health care and aged care; family planning)
    - If GPs do, what are the components of the services? How do GPs deliver the services?
    - If GPs do not, why not?
  8. What are the differences of GPs' work in community health centres and the work in hospitals?
    - What is the difference of GPs' relationship with the patients to work in community health centres compared to working in hospital?
    - What is the difference of GPs' work pattern compared to working in hospital?
    - How do GPs communicate with other medical specialists in their hospital in caring the patients?
    - How do GPs communicate with other medical specialist in other hospitals in caring the patients?
  9. How do you meet the community health needs?
    - What are the major community health needs?
    - How do you know?

- How do you organize your activities to meet the community health needs?
- Could you please give an example?

10. How do you encourage community health services?

- How do you select GPs?
- How do you encourage GPs to do community health services?
- How do you fund community health services?
- How do you pay GPs?
- Where is GPs' bonus come from?
- How much proportion is GPs bonus comprised in the income?

11. What kind of training do GPs need?

- What is the most urgent training need for GPs generally to deliver community health services?
- How do you train your selected GPs?
- How do you rate the training for GPs?

12. What kinds of training do administrators need?

- What's your educational background?
- What kind of training have you received regarding managing community health services?
- How do you rate the training programs?
- What else do you think is important for you to be trained?

## For General Practitioners

1. Could you please tell me a bit about the kind of patients you see?
  - Do you have a list of patients?
  - Whom did you see yesterday?
  - Could you please tell me some details of your services yesterday?
    - What were the reasons for visits of your patients?
    - What did you do?
    - Why?
2. Did you pay home visit to patients?
  - What kinds of patients did you pay home visits?
  - How often did you pay home visit?
  - What did you do in home visits?
  - Why did you pay home visits?
3. Did you go to see your hospitalised patients?
  - What kinds of patients did you usually see in hospitals?
  - How often did you go hospitals to see your patients?
  - What did you do in hospital visits?
  - Why did you go hospitals to see your patients?
4. How is the community health service in your hospital established?
  - Could you please tell me what “community health service” looks like in your hospital?
  - What is the administrative structure for the delivering of community health services?
  - Who work in the community health service centre?
  - What are the key elements in your community health services?
  - How does your hospital organize community health services?
5. How would you rate the performance of the community health service provided by your hospital?
  - What are the strength of this program?
  - If other people from other cities come to see your community health services, what aspects of your program was what you most want to present?
  - Are there any weakness in this program? (please specify)

- What are the frustrations for you of working in this program?
- How are the qualities of other aspects of the performance of community health services in your hospital?  
How do you provide for easy access services in terms of time?  
How do you provide for easy access services in terms of distance?  
How do you provide for easy access services in terms of financial burden?  
To what extent do community residents know your services?  
Do individuals in your contract communities identify your hospital as their regular source of care and use it as such over a period of time?  
How do you keep trace of the health problems of residents in your contract communities?  
How do you coordinate services provided by different providers?  
How do the patients rate your community health services?

6. What is GP's role in delivering community health services?

- What are the main services do you deliver?
- Do you deliver the following six aspects of services? (preventive services; health education; clinical services; rehabilitation; maternal and child health care and aged care; family planning)

If you do, what are the components of the services? How do you deliver the services?

If you do not, why not?

7. What are the differences of your work in community health departments and the work in hospital?

- What is the difference of your relationship with you patients to work in community health department compared to working in hospital?
- What is the difference of your work pattern compared to working in hospital?
- How do you communicate with other medical specialists in your hospital in caring your patients?
- How do you communicate with other medical specialist in other hospitals in caring your patients?

8. How do you meet the community health needs?

- What are the major community health needs?
- How do you know?

- How do you organize your activities to meet the community health needs?
  - Could you please give an example?
9. How do your hospital encourage community health services?
- How are you selected to be GPs?
  - What's your manager's attitude towards community health services?
  - How are you encouraged to do community health services?
  - How does your hospital fund community health services?
  - Where is your bonus come from?
  - How much proportion is your bonus comprised in your income?
10. What kind of training do GPs need?
- What is the most urgent training need for GPs generally to deliver community health services?
  - What is your training background in university or college?
  - What specialised training for GPs have you received?
  - How do you rate the training for GPs you have received?
  - Could you please tell me your working experiences before you became a GP?
  - What is the most urgent training needs for you generally to deliver community health services?

## Appendix C. Coding tree for interview

- (1) /accessibility
  - (1 1) /accessibility/time
    - (1 1 1) /accessibility/time/all time or limited time
    - (1 1 2) /accessibility/time/queue
  - (1 2) /accessibility/geographic
    - (1 2 1) /accessibility/geographic/service circle
    - (1 2 2) /accessibility/geographic/transportation
    - (1 2 3) /accessibility/geographic/affiliated station
    - (1 2 4) /accessibility/geographic/existence of other health institutions
  - (1 3) /accessibility/financial
    - (1 3 1) /accessibility/financial/financial affordable
    - (1 3 2) /accessibility/financial/discount in price
    - (1 3 3) /accessibility/financial/insurance reimbursement
  
- (2) /coordination
  - (2 1) /coordination/first contact
    - (2 1 1) /coordination/first contact/first contact
    - (2 1 2) /coordination/first contact/bypass
  - (2 2) /coordination/patients manager or gatekeeper
    - (2 2 1) /coordination/patients manager or gatekeeper/organizing services
    - (2 2 2) /coordination/patients manager or gatekeeper/help make decision
  - (2 3) /coordination/professional relationship
    - (2 3 1) /coordination/professional relationship/attached to own hospitals
    - (2 3 2) /coordination/professional relationship/rare communication with specialists
    - (2 3 3) /coordination/professional relationship/with other hospitals
      - (2 3 3 1) /coordination/professional relationship/with other hospitals/competition
      - (2 3 3 2) /coordination/professional relationship/with other hospitals/contract
    - (2 3 4) /coordination/professional relationship/compete with private health service providers
    - (2 3 5) /coordination/professional relationship/with preventive institutions



- (2 3 5 1) /coordination/professional relationship/with preventive institutions/share responsibility
- (2 3 5 2) /coordination/professional relationship/with preventive institutions/competition
- (2 3 5 3) /coordination/professional relationship/with preventive institutions/evade responsibility
- (2 3 5 4) /coordination/professional relationship/with preventive institutions/separated by administration
- (2 3 6) /coordination/professional relationship/with other stakeholders
  
- (3) /continuity
- (3 1) /continuity/dual referral
- (3 1 1) /continuity/dual referral/referral patients to hospitals
- (3 1 1 1) /continuity/dual referral/referral patients to hospitals/referral patients to own hospitals
- (3 1 1 2) /continuity/dual referral/referral patients to hospitals/referral patients to other hospitals
- (3 1 1 2 1) /continuity/dual referral/referral patients to hospitals/referral patients to other hospitals/reason for referral
- (3 1 1 2 2) /continuity/dual referral/referral patients to hospitals/referral patients to other hospitals/self choice by patient
- (3 1 2) /continuity/dual referral/back-referral from hospitals
- (3 1 2 1) /continuity/dual referral/back-referral from hospitals/rare back-referral
- (3 1 2 2) /continuity/dual referral/back-referral from hospitals/self choice by patient
- (3 2) /continuity/systematic management
- (3 2 1) /continuity/systematic management/cancer
- (3 2 2) /continuity/systematic management/others
- (3 3) /continuity/health file
- (3 3 1) /continuity/health file/separate from medical practice
- (3 3 2) /continuity/health file/medical record
- (3 3 3) /continuity/health file/computerised informational management system
- (3 4) /continuity/followup
- (3 4 1) /continuity/followup/follow up cases referred to other health providers
- (3 4 2) /continuity/followup/follow up cases after first visit

- (3 5) /continuity/fixed customer
- (4) /comprehensiveness
  - (4 1) /comprehensiveness/contents
    - (4 1 1) /comprehensiveness/contents/clinical component
      - (4 1 1 1) /comprehensiveness/contents/clinical component/beds
      - (4 1 2) /comprehensiveness/contents/preventive services and care
        - (4 1 2 1) /comprehensiveness/contents/preventive services and care/provided by specialised staff
        - (4 1 2 2) /comprehensiveness/contents/preventive services and care/provided by GP
        - (4 1 2 3) /comprehensiveness/contents/preventive services and care/provided by other institution
      - (4 1 3) /comprehensiveness/contents/family planning
      - (4 1 4) /comprehensiveness/contents/rehabilitation
      - (4 1 5) /comprehensiveness/contents/health education
      - (4 1 6) /comprehensiveness/contents/laboratory
      - (4 1 7) /comprehensiveness/contents/nursing home
      - (4 1 8) /comprehensiveness/contents/palliative care
      - (4 1 9) /comprehensiveness/contents/providing drugs
    - (4 2) /comprehensiveness/pattern
      - (4 2 1) /comprehensiveness/pattern/individualized
      - (4 2 2) /comprehensiveness/pattern/lack of planning
      - (4 2 3) /comprehensiveness/pattern/no change as before
      - (4 2 4) /comprehensiveness/pattern/reorganize task among front hospitals
      - (4 2 5) /comprehensiveness/pattern/team work (clinic & home visit)
      - (4 2 6) /comprehensiveness/pattern/population centred
- (5) /quality of services
  - (5 1) /quality of services/personnel
    - (5 1 1) /quality of services/personnel/willingness to work in CHC
    - (5 1 2) /quality of services/personnel/training background of GP
    - (5 1 3) /quality of services/personnel/recruit GP

- (5 1 4) /quality of services/personnel/working experience
- (5 1 5) /quality of services/personnel/competency
- (5 1 6) /quality of services/personnel/frequent change of staff
- (5 2) /quality of services/performance
- (5 2 1) /quality of services/performance/clinical services
- (5 2 2) /quality of services/performance/others
- (5 3) /quality of services/outcome
- (5 3 1) /quality of services/outcome/change of condition
- (5 3 2) /quality of services/outcome/patients satisfaction
- (5 4) /quality of services/equipment
- (5 4 1) /quality of services/equipment/not well equipped
- (5 4 2) /quality of services/equipment/lack of skill in using adequately
- (5 5) /quality of services/well known
- (5 6) /quality of services/physician patient relationship
  
- (6) /interviewees backgrounds
- (6 1) /interviewees backgrounds/gender
- (6 1 1) /interviewees backgrounds/gender/male
- (6 1 2) /interviewees backgrounds/gender/female
- (6 2) /interviewees backgrounds/position
- (6 2 1) /interviewees backgrounds/position/hospital head
- (6 2 2) /interviewees backgrounds/position/director
- (6 2 3) /interviewees backgrounds/position/GP
- (6 2 4) /interviewees backgrounds/position/officer of health authority
- (6 3) /interviewees backgrounds/education
- (6 3 1) /interviewees backgrounds/education/bachelor
- (6 3 2) /interviewees backgrounds/education/associate bachelor
- (6 3 3) /interviewees backgrounds/education/professional training
- (6 4) /interviewees backgrounds/age
- (6 4 1) /interviewees backgrounds/age/<30
- (6 4 2) /interviewees backgrounds/age/30-39
- (6 4 3) /interviewees backgrounds/age/40-49

- (6 4 4) /interviewees backgrounds/age/50-59
- (6 4 5) /interviewees backgrounds/age/>=60
- (6 5) /interviewees backgrounds/professionals
- (6 5 1) /interviewees backgrounds/professionals/internalist
- (6 5 2) /interviewees backgrounds/professionals/surgeon
- (6 5 3) /interviewees backgrounds/professionals/nurse
- (6 5 4) /interviewees backgrounds/professionals/others
  
- (7) /administrative structure
- (7 1) /administrative structure/funding
- (7 1 1) /administrative structure/funding/by hospital
- (7 1 2) /administrative structure/funding/by local health authority
- (7 1 3) /administrative structure/funding/by local government
- (7 1 4) /administrative structure/funding/by other resources
- (7 1 5) /administrative structure/funding/by self
- (7 1 6) /administrative structure/funding/by project
- (7 2) /administrative structure/management practice
- (7 2 1) /administrative structure/management practice/hospital role
- (7 2 1 1) /administrative structure/management practice/hospital role/role of hospital head
- (7 2 2) /administrative structure/management practice/role of local health authority
- (7 2 3) /administrative structure/management practice/role of local government
- (7 2 4) /administrative structure/management practice/role of director
- (7 2 4 1) /administrative structure/management practice/role of director/human resource management
- (7 2 4 2) /administrative structure/management practice/role of director/practice management
- (7 2 4 3) /administrative structure/management practice/role of director/financial management
- (7 2 5) /administrative structure/management practice/role of GP
- (7 2 6) /administrative structure/management practice/role of others
- (7 2 7) /administrative structure/management practice/role of management committee
- (7 3) /administrative structure/incentives
- (7 4) /administrative structure/financial revenue

- (7 5) /administrative structure/insurance
- (8) /CHS practice
- (8 1) /CHS practice/baseline survey
- (8 1 1) /CHS practice/baseline survey/purpose of survey
- (8 2) /CHS practice/community diagnosis
- (8 2 1) /CHS practice/community diagnosis/report on health needs
- (8 2 2) /CHS practice/community diagnosis/lack of informational management system
- (8 2 3) /CHS practice/community diagnosis/residential involvement
- (8 3) /CHS practice/problem oriented practice
- (8 3 1) /CHS practice/problem oriented practice/clinical oriented
- (8 3 2) /CHS practice/problem oriented practice/lack of community evidence
- (8 3 3) /CHS practice/problem oriented practice/assigned by project
- (8 4) /CHS practice/evaluation
- (8 4 1) /CHS practice/evaluation /focus on contents
- (8 4 2) /CHS practice/evaluation /shape the behaviour of CHS
- (8 5) /CHS practice/home visit
- (8 5 1) /CHS practice/home visit/reason for home visit
- (8 5 1 1) /CHS practice/home visit/reason for home visit/element of contract
- (8 5 1 2) /CHS practice/home visit/reason for home visit/disability of patient to attending CHC
- (8 5 1 3) /CHS practice/home visit/reason for home visit/requirement by project
- (8 5 1 4) /CHS practice/home visit/reason for home visit/other
- (8 5 2) /CHS practice/home visit/prominent change of pattern in service
- (8 5 3) /CHS practice/home visit/home bed
- (8 5 4) /CHS practice/home visit/contents of home visit
- (8 6) /CHS practice/contract
- (8 6 1) /CHS practice/contract/keep clients
- (8 6 2) /CHS practice/contract/non-for-profit
- (8 6 3) /CHS practice/contract/uniform requirement
- (8 6 4) /CHS practice/contract/increasing impact
- (8 6 5) /CHS practice/contract/contract with group

(8 6 6) /CHS practice/contract/patients willingness to sign

(9) /attitudes

(9 1) /attitudes/positive

(9 1 1) /attitudes/positive/potential direction

(9 1 2) /attitudes/positive/good for resident

(9 1 3) /attitudes/positive/reduce hospital visit

(9 1 4) /attitudes/positive/like it

(9 1 5) /attitudes/positive/pressure to improve quality

(9 1 6) /attitudes/positive/priority

(9 1 7) /attitudes/positive/future career

(9 1 8) /attitudes/positive/chance for continuity research

(9 1 9) /attitudes/positive/gradually accept

(9 2) /attitudes/negative

(9 2 1) /attitudes/negative/no profit

(9 2 2) /attitudes/negative/loss of skill

(9 2 3) /attitudes/negative/low quality

(9 2 4) /attitudes/negative/unimportant

(9 2 5) /attitudes/negative/bad environment

(9 3) /attitudes/Neutral

(9 3 1) /attitudes/Neutral/political issue

(9 3 2) /attitudes/Neutral/governmental duty

(9 3 3) /attitudes/Neutral/assigned by manager

(9 3 4) /attitudes/Neutral/marketing

(9 3 5) /attitudes/Neutral/change of hospital

(9 3 6) /attitudes/Neutral/don't care

(9 3 7) /attitudes/Neutral/don't know

(10) /training perception

(10 1) /training perception/GP

(10 1 1) /training perception/GP/clinical component

(10 1 1 1) /training perception/GP/clinical component/management of chronic condition

- (10 1 2) /training perception/GP/pattern of working
- (10 1 2 1) /training perception/GP/pattern of working/communicate with client
- (10 1 2 2) /training perception/GP/pattern of working/organize activities
- (10 1 2 3) /training perception/GP/pattern of working/social mobilization
- (10 1 2 4) /training perception/GP/pattern of working/social medicine
- (10 1 3) /training perception/GP/concept of CHS
- (10 1 4) /training perception/GP/analysing data
- (10 1 5) /training perception/GP/preventive service
- (10 1 6) /training perception/GP/general medicine
- (10 1 7) /training perception/GP/encourage to be engaged in CHS
- (10 2) /training perception/administrators
- (10 2 1) /training perception/administrators/health administrators
- (10 2 2) /training perception/administrators/non health administrators
- (10 3) /training perception/allied health
- (10 4) /training perception/pattern of training
  
- (F) //Free Nodes
- (F 1) //Free Nodes/traditional medicine
- (F 2) //Free Nodes/staff number in CHC
- (F 2 1) //Free Nodes/staff number in CHC/structure of staff
- (F 3) //Free Nodes/establishment of CHC
- (F 4) //Free Nodes/training received by GP
- (F 5) //Free Nodes/clients
- (F 6) //Free Nodes/difficulties and frustrations
- (F 6 1) //Free Nodes/difficulties and frustrations/difficult in baseline survey
- (F 6 2) //Free Nodes/difficulties and frustrations/difficult in home visit
- (F 6 3) //Free Nodes/difficulties and frustrations/make contract
- (F 6 4) //Free Nodes/difficulties and frustrations/lack of equipment
- (F 6 5) //Free Nodes/difficulties and frustrations/lack of funding
- (F 6 6) //Free Nodes/difficulties and frustrations/lack of personnel
- (F 6 7) //Free Nodes/difficulties and frustrations/lack of skill
- (F 6 8) //Free Nodes/difficulties and frustrations/risk and conflict

- (F 6 9) //Free Nodes/difficulties and frustrations/competition
- (F 6 10) //Free Nodes/difficulties and frustrations/lack of training
- (F 6 11) //Free Nodes/difficulties and frustrations/lack of understanding from resident
- (F 6 12) //Free Nodes/difficulties and frustrations/policy is not implemented
- (F 6 13) //Free Nodes/difficulties and frustrations/lack of information
- (F 6 14) //Free Nodes/difficulties and frustrations/lack of power
- (F 6 15) //Free Nodes/difficulties and frustrations/implement contract
- (F 6 16) //Free Nodes/difficulties and frustrations/meet client's needs
- (F 6 17) //Free Nodes/difficulties and frustrations/determine settings
- (F 6 18) //Free Nodes/difficulties and frustrations/wide range of diseases
- (F 6 19) //Free Nodes/difficulties and frustrations/price of drugs
- (F 6 20) //Free Nodes/difficulties and frustrations/lack of community mobilisation
- (F 6 21) //Free Nodes/difficulties and frustrations/lack of incentives



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