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DECENTRALIZING RURAL HEALTH SERVICES: A CASE STUDY IN CHINA

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SUMMARY

Many low and middle-income countries have decentralized their public health services in an effort to improve their equity, efficiency and effectiveness. This paper presents a case study of a poor rural county in China that devolved finance and management of basic health services to townships, the lowest level of government. It finds little evidence that townships mobilized additional financial resources or that they were able to address major management problems effectively. It cautions against unrealistically rapid decentralization of health services in poor rural areas. Copyright © 2000 John Wiley & Sons, Ltd.

KEY WORDS: decentralization; health services; health sector reform; China

There has been a wave of health sector reforms around the world which commonly include the decentralization of public health services (Andreano, 1996). Experiments with decentralization have been underway since the late 1970s (Conn *et al*., 1996; Gilson and Mills, 1995; Leighton, 1996); more than 25 countries in Africa were implementing some sort of decentralization in the early 1990s (Adamolekun, 1991); Papua New Guinea has implemented a particularly radical decentralization of public health services (Kolehmainen-Aitken, 1992; Campos-Outcalt *et al*., 1995); and a number of transitional economies in Asia and the former Soviet Union are decentralizing their health services (Ensor, 1996, unpublished report to Asian Development Bank).

Analysts of decentralization differentiate between deconcentration, delegation, devolution and privatization (Rondinelli *et al*., 1983; Collins, 1994; Bossert, 1998). This paper concentrates on devolution, the transfer of legally defined elements of political power to a general territorial power (local

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government) or a specialist or functional authority. It focuses on China's devolution of its rural health services to the lowest level of government.

According to theories of public administration, decentralization should increase the responsiveness of services to local needs, facilitate mobilization of local resources, and overcome the disadvantages of centralized and distant bureaucracies. It is claimed that it can lead to improvements in equity, efficiency and effectiveness. There is a broad consensus regarding the potential benefits of decentralization in low and middle-income countries and their Ministries of Health have been encouraged to implement these reforms (WHO, 1988). Decentralization has been seen to be an important ingredient in the success of primary health care policies (Ebrahim and Ranken, 1988).

Some authors have warned against an uncritical adoption of decentralization policies. Collins and Greens (1994) argue that the impact of decentralization depends on how it is implemented and draw attention to the need to assess the incentives any changes provide to key players. Bossert (1998) makes a similar point in advocating systematic assessment of the incentives stakeholders face and of their differing capacities to respond to them. He urges that decentralization strategies be made context specific.

In spite of the widespread implementation of decentralization, there has been a dearth of systematic studies of their impact (Gilson and Mills, 1995). The aim of this paper is to address this need with an example from China, where responsibility for rural health services has been devolved to townships† since the late 1980s (Yin, 1987; Sheng *et al*., 1992). It assesses the impact of devolution on the performance of a poor rural county's health services.

THE DEVOLUTION OF RURAL HEALTH SERVICES IN CHINA

In 1978, the Third Plenary of the Tenth Congress of the Communist Party ratified a programme of economic reform aimed at implementing China's transition to a market economy with socialist characteristics (Hussain, 1990). Since that time, the system of public sector finance and management, the labour market and many other aspects of economic organization have changed greatly. Government functions have been radically decentralized. This has given local politicians and governments strong incentives to encourage local economic development (White, 1993; Oi, 1999). The financing, organization and management of health services have been decentralized as part of the broader economic and institutional reforms.

The economic reforms have had a substantial impact on the organization and finance of China's rural health services (Jamison *et al*., 1984; Huang, 1988; Young, 1989; Yu, 1992; Bloom and Gu, 1997). In 1983–84 the government replaced the commune and brigade system of collective organization with township governments and village administrative commit-

† The district level in African countries is equivalent to the county level in China whilst the sub-district level is comparable to the township level of China.

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tees. The rural economy was de-collectivized and all townships and villages adopted the 'household responsibility system', which entitled each household to work an amount of land in proportion to its size (Powell, 1992). Households now have full financial responsibility for production. This has reduced the capacity of local administrative bodies to mobilize resources for collective use. In the meantime, local governments and state enterprises have been given greater autonomy. An important aspect of financial reform was a re-arrangement of revenue sharing between the central and local governments (Wong *et al.*, 1995). This has allowed particular regions and sectors to race ahead, whilst some poorer regions have experienced major financial difficulties.

The health sector faces difficult financial problems, particularly in poor areas (World Bank, 1997). The cooperative medical schemes, which were partly funded by the collective economy at township and village levels, collapsed in most of the country. Their coverage declined from almost 90% of villages in the late 1970s to less than 10% in the early 1990s (Feng *et al.*, 1995). Most rural residents now pay for services out-of-pocket. Many village health stations are privately managed and many village health workers function as private practitioners (Zhang, 1987; Kan, 1989). Township level health services have also changed a great deal, although the direction of change varies between rich and poor localities. Some health centres in rich townships have expanded and acquired new equipment (Xiang and Hillier, 1995). Many health centres in poor areas face severe difficulties related to lack of funding and loss of skilled health professionals (Tang *et al.*, 1994; Gong *et al.*, 1997).

It has been government policy, since the late 1970s, to devolve responsibility for a number of local activities to township governments:

> ... township government should govern its territory's economy, education, culture, health, sports, as well as finance, civil affairs, security, and family planning. (The National People's Congress, July 1, 1979)

The devolution of responsibility for financing and management of township health centres to township governments began in the late 1980s. At first the richer counties implemented this policy, hoping that township governments would increase funding of their health centres. This action became popular and was extended throughout China. Devolution in the health sector was believed to be consistent with the on-going economic reform that emphasized improvements in efficiency and effectiveness. Another purpose of devolution, as many county health bureaux officials noted, was to put pressure on township governments to allocate additional funds to health centres (Sheng *et al.*, 1992). Donglan County, where the case study took place, devolved its health services in 1990.

The relationships between county health bureaux, township governments and health centres have changed considerably. Health centres, which previously received funds from the county health bureau, are now funded by township

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governments. The second change pertains to the power to appoint personnel. After devolution the county health bureau can no longer control the appointment of health centre directors, or the recruitment of health centre staff. Township governments are now responsible for these activities, in consultation with the county health bureau. County Personnel and Labour Bureaux‡ still must give final approval to recommendations by township governments for appointments.

The township governments are now responsible for defining and developing local health care plans. However, county health bureaux still transmit national guidelines to them and provide technical support, when requested.

RESEARCH METHODS

The case study was part of a larger study of the financing and organization of health care in three rural counties selected on the basis of the following criteria: (i) infant mortality rates over 75 per 1000 live births, (ii) location in a government-defined poverty area and (iii) willingness by the local government to cooperate with the research team (Tang *et al.*, 1997).

Donglan County, in Guangxi Autonomous Region was selected for an in-depth study of the adaptation of township health centres to economic reform. It has nine township health centres, of which five were selected for in-depth investigation on the basis of their size and technical capacity. According to the County Health Bureau, the facilities in Wuzhuan and Taiping were above the average level in terms of their technical capacity, those in Donglan and Aidong were of average level and the one in Simeng was below the average level.

The data for the Donglan case study come from a number of sources. During the field visits, the regional and county statistical yearbooks published in 1981, 1985, 1990 and 1994 and relevant government documents issued in the past decade, were reviewed in order to understand the context of the social and economic development in the Guangxi Autonomous Region and Donglan County. All public health facilities above village level submit monthly and annual routine statistical reports on financing/expenditure and the provision of health services. The data on utilization of curative services provided by the health centres were relatively well recorded and kept by the county health bureau. It was possible to calculate the number of outpatient visits made to each health centre in different years, the average length of stay per inpatient admission, the average bed occupancy rate, and the average bed turnover rate. The personnel office of the county health bureau provided a report on the educational qualifications and technical ranks of the health workers at the township health centres.

‡ The personnel bureau of the county government is responsible for cadre recruitment, such as teachers, doctors and civil servants, whilst the labour bureau is responsible for the recruitment of workers and staff such as the non-health personnel in the health centres.

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The researchers interviewed eight government officials and Communist Party cadres responsible for health services at the county level and four from township levels to obtain their views on the following:

- impact of fiscal and administrative decentralization on local government finance and financing of health services;
- implication of the devolution to the township of responsibility for financing and organization of township and village level health services; and
- changes in government personnel policy and the appropriate personnel structure at the township health centres in the poor areas.

The directors of the five township health centres were interviewed in their health centres. They were asked about the contrast between the officially defined functions of their facility and its actual performance, the adaptations of the health centre to the new environment, and the strategies used to cope with financial difficulties. The directors were asked to comment on the devolution of township health centres, changes in the government policies on the financing and organization of rural health services, and other relevant issues.

Focus group discussions with health centre employees were organized in all five townships. The groups included five to seven health workers chosen on the basis of their job, sex and age. The total number of the health workers participating in the focus group discussions was 28 persons, of which female health workers accounted for about 57% (16 persons). They included seven doctors and assistant doctors, 17 nurses responsible for MCH and preventive care, and four pharmacists and other technicians. The health centre directors were excluded to encourage participants to speak freely. The group facilitators discussed the following, using a semi-structured outline:

- changes in the provision of curative and preventive services over the previous decade;
- willingness to work at the health centres and the motivation to leave for other jobs;
- opinions on the devolution of responsibility for township health centres to township governments;
- the relationship between the use of drugs and revenue generation; and
- changes in training/supervision to village health workers.

Five focus group discussions with local peasants were held at the offices of the village administrative committees. Socio-economic and geographical factors were taken into account in the selection of villages. When selecting participants for the group discussion, issues such as household income and gender were considered. On average, female peasants accounted for about 40% of all the participants of the focus group discussions. Health workers were excluded. A research assistant from Guangxi Health Management College translated the local dialect.

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RESULTS AND DISCUSSION

Financing township health centres

One purpose of the devolution was to encourage township governments to increase funding for their health centre. Table 1 demonstrates, on the contrary, that the ratio of government grant to total health centre revenue decreased in Donglan's health centres. The government grant accounted for 46% of the income of the county's health centres in 1981 but only 32% in 1994. The health centres had to earn the balance from patients.

Townships failed to allocate funds for investment in health facilities. In November 1991, the State Planning Commission and the Ministry of Health jointly set up the 'three items construction programme' to finance investment in rural health facilities. The programme required all levels of government to contribute. The Director of Donglan County Health Bureau reported that provincial, prefecture and county governments allocated, 400, 300 and 346 thousand yuan, respectively, for construction and/or refurbishment of health centres. None of the township governments provided any funds. This substantially impeded progress with construction.

There are several explanations for the inability or unwillingness of township governments to allocate funds to local health services. First, although they are able to collect taxes and levy monies for special programmes, they are often restricted by the policies developed by the central government. In the late 1980s, most township governments imposed substantial levies on peasants in order to hasten local social and economic development. This put a heavy financial burden on rural households and provoked resistance. The Central Committee of the Communist Party and the State Council issued an official document (State Council, 1993) which defined the items for which levies could be imposed and forbade local governments from collecting more than 5% of average annual income in levies.

Donglan is a poor county and most of the income of county and township governments comes from fiscal transfers from higher levels. Neither the county, nor township governments collect sufficient taxes from local enterprises, individual households, and other sources to finance local public services. The heads of township governments reported that they had been reluctant to accept direct responsibility for financing and managing their facilities for this reason.

Table 1. Government grants to township health centres in Donglan, 1981–1994

	1981	1985	1990	1992	1994
Government grant (1000 yuan)					
Current price	190	289	320	430	647
1981 prices	190	186	142	156	185
Government grant as % total income	46	40	30	29	32

Source: County Health Bureau.

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This illustrates the point made by Bird and associates (1995) that an increase in local autonomy is not very meaningful unless accompanied by fiscal capacity.

Health service management

Health service management embraces a wide range of functions (Cassels and Janovsky, 1991). The following discussion focuses on financial and personnel issues, because they have been most affected by devolution.

Health centres now receive their government grant from their township government instead of the county health bureau. The major impact has been on the level of funding (Table 1). Health centre managers also report that devolution has created additional financial insecurity. For example, the deputy director of one health centre reported that the township government asked local public institutions to assign their staff to working groups put together to undertake tasks, such as purchasing grain during the harvest season and forest protection. The government threatened to hold back its grant if the health centre refused to provide staff for these activities. He had to comply, to the detriment of service provision.

Township governments are now responsible for the appointment of personnel, and they do not necessarily have to take the views of the county health bureau into account. In the early 1980s, the Ministry of Health formulated guidelines concerning personnel management including recommendations that the percentage of non-health workers should not exceed 25% of total health centre staff, and health workers should not be permitted to provide medical services if they are not qualified. The aim was to maintain the quality of health services. Data from the Donglan County Personnel Office show that these targets have not been met. The percentage of health centre employees with some form of health-related training fell between 1981 and 1994 from 78% to 56%.

Table 2 shows the numbers of health workers and non-health workers in six of the county's health centres in 1994. Only 8% of employees had been trained at post-secondary or medical college levels, or beyond. Donglan Township Health Centre is the sole facility that met the government target of 75% of employees with health-related training. These results are consistent with the information obtained from interviews with directors and group discussions with health workers. Many health workers were concerned that too many people had been hired as cleaners and accountants. Gong *et al.* (1997) point to a general shortage of well-trained and experienced health workers in poor rural areas. They suggest that this has had a deleterious effect on the remaining personnel who work with little supervision or management.

Information collected from various sources suggests that devolution had contributed to the increased employment of unskilled personnel. Mechanisms of local democracy are in their infancy in the poorer areas of rural China and local governments are only weakly accountable to their constituencies (Howell, 1998). In these circumstances, as Prud'homme (1995) argues, decentralization

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can increase the opportunities for local power holders to act in their own interest, as supervision from higher levels of government diminishes. The director of the county health bureau reported that township governments had encouraged employment of non-health staff. One reason for this was to secure employment for family members of government officials, and thereby reduce the likelihood that they would leave. The government policy of encouraging institutions to recruit the children of retirees and assign them to jobs based on their qualifications also contributed to staff increases.

Another impact of devolution was that the county health bureau could no longer transfer personnel between facilities, if there was an historical imbalance of staff deployment. According to the health bureau, some health centres have enough laboratory technicians but too few doctors, and others have enough physicians but no laboratory technicians. Campos-Outcalt *et al.* (1995) report similar problems in the Western Highlands Province of Papua New Guinea.

A third problem is the lack of personnel at township level with skills in health sector management. An official in Aidong Township reported that most government officials responsible for health have had no training in health administration and management. They find it difficult to deal with issues related to health services. He added that the townships had not wanted counties to devolve responsibility for health services. This was a national policy that did not take local realities adequately into account. Several health centre directors reported similar problems with government officials who underline the need to couple decentralization with a major effort to strengthen local management (Collins and Green, 1994; Mills, 1994).

Implications for efficiency and quality of health services

The devolution of Donglan's health services has led to falls in efficiency and the quality of services. Table 3 shows that the number of outpatient visits per staff

Table 2. Numbers of health workers and non-health workers in selected township health centres in Donglan County, 1994

Township	College-trained health workers[a]	Other trained health workers[b]	Untrained staff	Health workers as proportion of staff (%)
Donglan	5	22	9	75
Simeng	1	7	7	53
Wuzhuan	1	17	12	63
Taiping	1	10	15	42
Aidong	3	22	15	63
Changjiang	2	17	15	55

Source data: The County Health Bureau.
[a]A type of the health worker who obtained diplomas from medical colleges and schools with at least three years training.
[b]This type of the health worker were those who often completed junior high school education and then studied at medical or public health schools primarily at the county and prefecture levels for 2–3 years.

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Table 3. Average outpatient visits per staff and per doctor, 1986 and 1994

Health centre	OP visits per staff[a]		OP visits per doctor	
	1986	1994	1986	1994
Donglan	2010	510	4007	947
Simeng	960	780	2423	1925
Aidong	1230	510	2215	862
Taiping	1170	1140	2326	2449
Wuzhuan	1050	390	2259	770
Changjiang	1050	780	1566	1785
Jinguo	1320	750	2625	1113
Changle	1200	450	2307	1126
Datong	630	480	1105	829
Mean	1180	643	2315	1326

Source: The County Health Bureau.
[a]The number of staff included doctors and other health related professionals working at the health centres.

decreased in all facilities between 1986 and 1994 and the average number for all facilities fell by 46%. During the same period, the number of OP visits per doctor fell in all but two of the health centres, and the average fell by 43%. The health centres provide inpatient services, as well. Data from routine reports showed that only Taiping Health Centre had more inpatient admissions in 1994 (654 cases) than in 1986 (573 cases), but it reported fewer inpatient days. There can be little doubt that the workload of health centre employees fell substantially between 1986 and 1994. In spite of falls in demand, six of the nine health centres increased their staff numbers between 1986 to 1994.

These findings are consistent with the findings of the interviews with health centre directors and group discussions with the health workers. Some health workers remarked that doctors and nurses spend an increasing amount of time waiting for patients. It was mainly because many patients either sought health care from other providers, such as village health stations or county hospitals, or just purchased drugs from local pharmacies for self-treatment.

One of the major themes of the focus group discussions with users was the perceived fall in the quality of services provided by health centres. Many peasants complained that health centres no longer had the 'good doctors', who previously had provided services. This is partly due to the dramatic exodus of the most highly trained and experienced personnel from rural facilities, since the loosening of controls on the movement of health workers (Gong *et al.*, 1997). It also reflects the subsequent recruitment of less well qualified people as providers of services.

The chronic shortage of government funding has led to changes in the technical capacity of health facilities. For example, years of inadequate maintenance of x-ray and other diagnostic equipment has led to a reduced ability to investigate health problems. Also buildings have become very run down.

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A further response of health centres to the difficult financial climate contributed to falls in demand: they have compensated for low levels of government funding by striving to increase revenue from patients. They are allowed to charge a mark-up on drug sales and this has encouraged them to try to sell more drugs. According to the health centre directors, profits from drugs are a major source of finance. Zhan *et al.* (1997) report on a survey undertaken in Donglan and two other counties that the average number of drug items per prescription was higher in health centres than in the county hospital, and that 38% of prescriptions included antibiotics. This practice increases the cost of services and exposes patients to the risk of dangerous side-effects. It may have also contributed to falls in demand.

CONCLUSIONS

The experience of Donglan County illustrates the need for caution in devolving health services in poor rural areas. It led to neither increased local government health finance, nor improvements in equity, efficiency and effectiveness. On the contrary the performance of health centres deteriorated due to a combination of severe financial constraints, shortages of personnel with medical and managerial skills, the loss of the ability to re-deploy personnel between facilities, and employment practices that reflected the interests of local notables rather than the needs of the health facilities, themselves.

Donglan County concluded that the preconditions for successful devolution did not yet exist and it has recently returned control over health centre finance and management to the county health bureau. This case provides a salutary warning to policy makers and health service managers, who do not take local realities into account in designing decentralization strategies. It cautions against attempts to implement rapid decentralization without addressing the financial problems of local governments and weaknesses in management capacity. It suggests that it is better to phase in implementation over time in order to increase the likelihood that it leads to improved performance of local services.

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REFERENCES

Adamolekun L. 1991. Promoting African decentralisation. *Public Admin Devel* **11**: 285–291.

Andreano R. 1996. Discussion on decentralisation and health sector reform. IHPPnet.

Bird RM, Ebel RD, Wallich CI. 1995. Decentralisation of socialist state—Intergovernment finance in transition economies, World Bank, Washington DC.

Bloom G, Gu X. 1997. Health sector reform: lessons from China. *Soc Sci Med* **45**: 351–360.

Bossert T. 1998. Analyzing the decentralization of health systems in developing countries: decision space, innovation and performance. *Soc Sci Med* **47**: 1513–1527.

Campos-Outcalt D, Kewa K, Thomason J. 1995. Decentralisation of health services in Western highland province, Papua New Guinea: an attempt to administer health services at the sub-district level. *Soc Sci Med* **40**: 1091–1098.

Cassels A, Janovsky K. 1991. Management development for primary health care: a framework for analysis. *Int J Health Plann Mgmt* **6**: 109–124.

Collins C. 1994. *Management and Organisation of Developing Health System*. Oxford University Press: Oxford.

Collins C, Green A. 1994. Decentralisation and primary health care: some negative implications in developing countries. *Int J Health Serv* **24**: 459–475.

Conn C, Green C, Walley J. 1996. Effective district health services in developing countries: a busy manager's guide to the literature. Development Bibliography 23. Institute of Development Studies: England.

Ebrahim GJ, Ranken JP (eds). 1988. *Primary Health Care: Reorienting Organizational Support*. Macmillan Press: Basingstoke.

Ensor T. 1996. *Health Sector Reform in Asian Transition Countries. A Consultant Report to the Asian Development Bank* (unpublished).

Feng XS, Tang SL, Bloom G, Segall M, Gu XY. 1995. Cooperative medical scheme in contemporary rural China. *Soc Sci Med* **41**: 1111–1118.

Gilson L, Mills A. 1995. Health sector reforms in sub-Saharan Africa: lessons of the last 10 years. In *Health Sector Reform in Developing Countries: Making Health Development Sustainable*, Berman P (ed.). Harvard University Press: Boston.

Gong Y, Wilkes A, Bloom G. 1997. Health human resource development in rural China. *Health Pol Plann* **12**: 320–328.

Huang SM. 1988. Transforming China's collective health care system: a village study. *Soc Sci Med* **27**: 879–888.

Howell J. 1998. Prospects for village self-governance in China. *J Peasant Studies* **25**: 86–111.

Hussain A. 1990. *The Chinese Enterprise Reforms*, CP No. 5, The Development Economics Research Programme, London School of Economics: London.

Jamison D, *et al*. 1984. *China: The Health Sector*. World Bank: Washington DC.

Kan XG. 1990. Village health workers in China: reappraising the current situation. *Health Pol Plann* **5**: 40–48.

Kolehmainen-Aitken R. 1992. The impact of decentralisation on health workforce development in Papua New Guinea. *Public Admin Devel* **12**: 175–191.

Leighton C. 1996. Strategies for achieving health financing reform in Africa. *World Devel* **24**: 1511–1525.

Mills A. 1994. Decentralisation and accountability in the health sector from an international perspective: what are the choices? *Public Admin Devel* **14**: 281–292.

Oi J. 1999. *Rural China Takes Off: Institutional Foundations of Economic Reform*. University of California Press: Berkeley.

Powell S. 1992. *Agricultural Reform in China, from Communes to Commodity Economy 1978–1990*. Manchester University Press: Manchester Studies on East Asia.

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Prud'homme R. 1995. The dangers of decentralisation. *Research Observer, The World Bank* **10**: 201–220.

Rondinelli DA, MaCullough JS, Johnson RW. 1989. Analysing decentralization policies in developing countries: a political-economic framework. *Devel Change* **20**: 57–87.

Sheng J, Lin ZH, Hao M. 1992. *Efficiency Evaluation of Using Health Resources in the Three-Tier Network of Rural Health Care in China*, Proceedings of the Workshop on Financing and Utilisation of Health Services in Rural China, Chengdu, China.

State Council of P.R. China. 1993. Notice on auditing and handling peasants' financial burden. *People's Daily*, 22 July 1993, Beijing, China.

Tang SL, Bloom G, Feng XL, *et al*. 1994. *Financial Health Services in China: Adapting to Economic Reform*. Research Report 26. Institute of Development Studies: England.

Tang SL, Feng XL, Lucas H. 1997. Introduction to the three-county study. *IDS Bull* **28**: 12–15. The National People's Congress, 1979. The Constitution of the People's Republic of China. People's Publishing House, Beijing.

White G. 1993. *Riding the Tiger — The Politics of Economic Reform in Post-Mao China*. Macmillan: Basingstoke.

Wong CPW, Hendy C, Woo NT. 1995. Fiscal management and economic reform in the People's Republic of China. Oxford University Press, Hong Kong.

World Bank. 1997. China 2020: Financing Health Care. World Bank: Washington.

WHO. 1988. *The Challenge of Implementation: District Health System for Primary Health Care*. WHO: Geneva.

Xiang Z, Hillier S. 1995. The reforms of the Chinese health care system: county level changes: the Jiangxi study. *Social Sci Med* **41**: 1057–1064.

Yin DK. 1987. Reform of township health centre's leadership and management system. *Chin J Health Serv Admin* **6**: 17–19.

Young ME. 1989. Impact of the rural reform on financing rural health services in China. *Health Policy* **11**: 27–42.

Yu D. 1992. Changes in health care financing and health status: the case of China in the 1980s. *Innocenti Occasional Papers*, Economic Policy Series, No. 34.

Zhan SK, Tang SL, Go YD. 1997. Drug prescribing in rural health facilities in China: implications for services quality and cost. *Trop Doctor* **28**: 42–48.

Zhang BQ. 1987. Managerial forms of rural health organisation. *Chin Rural Health Serv Admin* **11**: 25–28.

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