

China in transition: the new health insurance scheme for the urban employed

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Abstract

China has been very successful in achieving good health at a low cost, mostly through national programs for health promotion and illness prevention. However, increased prosperity in recent years has led to higher expectations for therapeutic care, and the change to a socialist market economy has created new risks and opportunities for both financing and care provision.

After several years of experimentation, China committed itself in 1996 to a major reform program which includes implementation of a new method of financing of care for the urban employed population. It comprises a mix of government-operated compulsory basic insurance, individual health savings accounts, and optional private health insurance.

This paper outlines the new Scheme, and notes some tactical and strategic issues. I conclude that the Chinese government is correctly choosing to balance new and old ideas, but that there are many challenges to be faced including integration of the new Scheme with the rest of the health care system.

The context: revolution and evolution

There have been many changes in China's health care system over the last 50 years. The private sector dominated care provision before 1949. It was virtually eliminated after the Chinese communist government was established, and did not re-emerge until the 'socialist market economy' (SME) reforms were initiated in 1982. Some parts of the private provider sector recovered rapidly. Private medical practice grew from zero to 5% of the medical workforce between 1980 and 1995.

The growth of private hospitals has been much slower. Constraints have included continuing financial advantages of public hospitals, and constraints on private practice for doctors employed in public hospitals. However, the government recently announced that many public hospitals will be allowed to separate their activities into for-profit and not-for-profit components. In some respects, this change resembles the Australian policy of colocation of public and private hospitals.

There have been fewer sudden changes of direction in health care financing. The Chinese health system has long had a high level of user-pay. There was a political desire after 1949 to create the kind of free-of-charge government-funded and delivered health care system which became the norm in the Soviet bloc and the western social democracies. However, the commitment was less strong, in that most Chinese cultures have had a sense of the importance of self-reliance. Moreover, it was widely believed that China did not have the resources to provide free services, other than at the basic and predominantly primary care level.

The communist government chose simply to provide subsidies for basic care, and to help vulnerable groups to obtain income-related (and often government-sponsored) insurance. The initial targets for insurance were urban and industrialised groups which could less easily rely on community support and self-help (Roemer 1997). Two employer-based urban insurance schemes were established during the early 1950s, as were the generally successful rural co-operative medical systems. The urban schemes suffered as a consequence of the SME reforms. The rural systems nearly collapsed, and have only recently begun to re-establish themselves (Carrin, Ron, Hui, et al, 1999).

One effect of implementation of the SME reforms was an increase in user-pay: its share of total health expenditure increased from 23% to 54% between 1980 and 1996. The government's share declined from 37% to 25% between 1980 and 1990 (Liu, Liu, and Meng, 1994). The downward trend has continued, and was only 17% in 1996. An important cause was the progressive decline in government budgetary contributions to public hospitals. Expenditure on all forms of health insurance declined from 41% to 30% over the same period. This was mainly a consequence of downward trends in employer-based insurance as described below.

There has been an increase in the use of commercial health insurance, and Lee & Shao (2000) claim that the potential is very large. Others argue that it is a temporary phenomenon. The government was relatively inactive in the early years of economic reform, and commercial insurance usefully filled some gaps. However, the government's decision to resume greater control after 1996 will mean that opportunities will be fewer in future. There are signs that this is already happening.

China's health system is facing many of the same pressures affecting all countries to varying degrees. Greater access to knowledge of other societies is causing a rapid change in expectations, including the use of new and expensive technologies. The success of population control through the 'one-child-per-family' policy since 1979 will mean that aging will hit China harder than most other countries in the next two or three decades.

Liu, Hsiao, Li, et al (1995) claim that the economic reforms are leading to greater income disparities, increased urbanisation, the breakdown of aspects of community self-help, and increased expectations for health care. Liu, Hsiao, and Eggleston (1999) argue that China is moving into the 21st century "... with increasing inequality plaguing the health component of its social safety net system." However, several authors suggest the effects may not have been significant throughout much of China (Henderson et al 1998).

As in the former command economies of the Soviet bloc, major technical and ethical problems are having to be addressed. The most obvious conflict is between social justice and the need to free China's economy from the costly burden of inefficient welfare programs.

The Chinese government is simultaneously pursuing reform in rural and urban areas. However, there may be greater risk in the rapidly growing urban areas, which are critical to the government's economic policies. It has therefore determined that a new health insurance scheme will be implemented called the Social Health Insurance Scheme in Urban Areas, or simply the new Scheme in this paper. I will give an outline of the new scheme, discuss some of the strategic and tactical issues, and then briefly comment on implications for the health system as a whole.

Origins of the new Scheme

As noted above, two health insurance schemes were established shortly after the Communist Party came to power. The Labour Health Insurance Scheme (LHI) was initiated in 1951. All state enterprises with more than 100 employees were required to allocate a percentage of employees' salaries and wages to an enterprise welfare fund for use in payment for health care. Employees were entitled to receive health services at no cost or with small copayments, and there were lower benefits for employees' dependants.

The Government Employees Health Insurance Scheme (GHI) was established in 1952. It was financed by the government. Like the LHI, both outpatient and inpatient health services were covered, and there were limited benefits for dependants.

There were some longstanding weaknesses in both schemes. One was the wide variation in access and level of service coverage due to differences in economic prosperity between regions and enterprises (Liu, Hsiao, and

Eggleston 1999). Temporary or permanent insolvency was a frequent occurrence because the risk was carried by the individual enterprises - and most enterprises were unwilling or unable to protect themselves against fluctuations in their own business performance and in health care costs (Hu, Ong, Lin, and Li 1999).

The difficulties were exacerbated in recent years by declining membership, which was mainly a consequence of the economic reforms (Ho, 1995). The number of employees of private enterprises increased rapidly, and the majority had no health care cover at all.

Differences in coverage and cost were seen by the government as important constraints to its goal of increasing the flexibility of use of labour. In general, the government's view that inadequate health insurance arrangements were slowing down economic reforms was a major stimulus to reform.

The most serious operational problem of the GHI and LHI schemes was that employers had no effective means of cost control. Most played a passive role, and simply paid health care bills on the assumption they were for necessary and appropriate care. Between 1978 and 1997, for example, expenditures by the two health insurance schemes increased by 19% per annum while the government's general revenue increased by only 11% per annum (MOLSS 1999). The difference was met mainly through increased self-pay in a variety of forms.

Most enterprises were expressing concerns about the strain on competitiveness. In 1997-98, health care expenditures were averaged 10% of salaries and wages. Chinese companies' views resembled those of Chrysler and other major companies in the USA in the late 1980s - and which were the catalysts for managed care in that country.

The government believes that perhaps 25% of services were being provided without good reason (MOLSS 1999). Recent statistics showed that mean lengths of stay for inpatient episodes were 60% higher for insured than uninsured patients, expenditure on drugs was up to 3.5 times higher, and there was uneven (and often excessive) use of high technology equipment like CT scanners (Liu, Hsiao, and Eggleston 1999; Dong et al 1999).

Cai et al (1998) reported that the cesarean section rate increased from 4.7% to 22.5% in the last thirty years, and that they argued that the increases "... may be an early indication that emerging forms of health insurance and fee-for-service payments to physicians will lead to an excessive emphasis on costly, high-technology medical care in China." However, there were other factors including introduction of the one-child policy, which caused parents to become more cautious about childbirth.

The problems are well illustrated with reference to drugs. Expenditures grew dramatically after 1980, and they accounted for almost half of insurance benefits in 1996. One underlying cause was the increased market freedom after 1982, which allowed drug companies to use more aggressive marketing methods directed at doctors and patients.

Another underlying factor was progressive reduction of government budgets for hospitals as part of the economic reforms. Hospitals were allowed to increase their charges and the range of chargeable services to create replacement income. Drugs charges were limited only to the extent that the profit margins on each item could not exceed 15% of the purchase price. This not only encouraged hospitals to prescribe greater quantities of drugs, but also gave them more reason to prescribe more expensive drugs.

Total expenditures on drugs increased by 45% between 1994 and 1998, and a disproportionate burden fell on the insured population. A recent study reported that outpatient drug costs for insured patients were roughly twice as high as those for uninsured patients, and often many medicines that were bought remained unused (Hillier & Shen, 1996). There was a significant level of illegal acquisition of insured services. For example, it was common for beneficiaries to obtain medications free of charge for use by non-insured family members (Zheng and Hillier, 1995).

The Chinese government has recently legislated to control these problems. The main change is that drug revenues have been separated from other hospital revenues, and profits on drug sales will now be returned to the local authority (rather than kept by the hospital). Support from doctors has been encouraged by promising that savings from reduced drug expenditure will be available to finance increases in doctors' salaries.

This was an important step forward, but the key structural problem remained unchanged: employers, acting as insurers, had too few tools or skills to evaluate appropriateness. It had become obvious to the government by the early 1990s that fundamental structural reforms were needed.

Experiments on which the new insurance scheme was based

Various ideas were tested during the 1980s including the use of simple output-based budget-share models, progressively more rigorous price-setting methods, various forms of social pooling, and aspects of the HMO model (Ho, 1995). After 1990, the government commissioned several major studies. One was the Two Jiang Project, which involved Zhenjiang City in Jiangso province and Jiujiang City in Jiangxi province and featured elements of the Singapore health care financing model. Hainan and Shenzhen trialled the 'plate' method whereby a social insurance scheme and individual health savings accounts are administered separately, and contribution rates to each are not tied. The 'three funds' model was trialled in Qingdao and Yantai. The individual account was managed by the enterprise, as was a restricted insurance fund only for its employees. A third fund was operated at the local authority level.

Shanghai's trial model used separate insurance pools for inpatient and ambulatory services. The employer contributed 4.5% of the employees' salary to the inpatient pool, from which benefits were 85% of the charges after a front-end deductible was paid by the employee. The proportional copayment of 15% was partly paid by the employee and partly by the enterprise, and both parties had the choice of self-insuring or obtaining commercial insurance cover. Similar rules applied for ambulatory services.

The commitment to change was announced by the government in 1997 in a broad-ranging health policy document that included three key elements (Chinese Ministry of Health, 1997). First, if the government's target of increasing health expenditure to 5% of GDP by 2010 is to be met, there must be a wider range of fund-raising channels including an increased level of user-pay for selected services, and increased membership of employer-based insurance.

Second, the current pattern of "largely illogical" provider payment rates should be replaced by one in which there are greater variations in price to reflect both estimated value and cost. Third, health insurance cover should be extended to community health care, and encouragement given to improved communication between community and hospital services. There should be increased spending on health promotion and illness prevention and less on hospital care.

The new insurance scheme for the urban employed

Details of the new Scheme were announced in December 1998. It is to cover all employees of government and privately owned enterprises, retirees of those enterprises, and the self-employed (called the employed population below). Implementation is being staged, and the aim is to have 150 million members within the first two years.

The new Scheme is managed by the recently established Ministry of Labour and Social Security (MOLSS), which has responsibility for all types of employment-related social services including pensions and unemployment benefits. However, operational responsibilities have been devolved to the municipal governments. They in turn have placed most of the work in the hands of the Municipal Labour Bureaus, but other city government agencies will play important roles. For example, the cities' Health Bureaus will continue to take the lead in health policy setting and control of health care providers.

In the previous schemes, each enterprise operated an insurance pool exclusively for its own employees. In contrast, the new Scheme divides most of the responsibilities between the government and individual employees, and the role of the enterprises is greatly reduced.

Five sources of financing of the new Scheme

Each Municipal Labour Bureau must manage an insurance pool (called the Social Pooling Fund) for the entire employed population within its jurisdiction. There is no risk pooling between the cities. The Fund is intended to provide benefits for hospital inpatient and a few high-cost outpatient services. It is financed by a contribution from each employer of 4.2% of its employees' salaries.

Each employee is required to make payments into an Individual Health Savings Account (IHSA), from which payments may be made for ambulatory health services and inpatient copayments. The IHSA is financed by a contribution of 2% of salary by each employee, and 1.8% by the employer. The contents of an IHSA can be

transferred to relatives. The interest paid on the balance is determined by the government, at about the average commercial rate for three-month fixed deposits (State Council 1998).

Contributions to the Social Pooling Funds and the IHSA's are largely income-related. However, many cities are also making use of an element of risk rating, to the extent that higher contributions will be required in proportion to employee age.

The third source of financing is copayments by employees. They include front-end deductibles, ceiling copayments, and proportional copayments for both inpatient and ambulatory services. The front-end-deductibles have been set at an amount roughly equal to 10% of the average annual salary, and the ceiling on benefit payments at four times the average annual salary. The proportional copayments for all inpatient services are being set at around 10% of the insurance liability (that is, the total charges minus front-end deductibles and uncovered charges).

The Social Pooling Fund and the Individual Health Savings Accounts will be insufficient to cover expensive treatments. The government therefore envisages that some employees will choose to take out Supplementary Insurance. Various methods are being used, or are under consideration.

In many cases, individual employees are left to make their own decisions on whether to purchase private health insurance. Some enterprises are creating supplementary insurance pools for all their employees. The government has suggested that contribution rates for such schemes should not exceed 4% of employees' earnings. A few cities intend to make a supplementary insurance pool compulsory for enterprises of particular types, and others intend to establish their own optional supplementary insurance pool rather than leave this to commercial insurance companies.

Finally, there will be government subsidies for some aspects of the new Scheme. For example, the costs of administration by the Municipal Labour Bureaus will be met from government general revenue and not from the insurance contributions.

There are many more complexities. For example, only the enterprise (and not the individual) makes contributions for retirees. Additional benefits are provided for government employees, partly to ensure there is an easier transition from the old schemes.

Members' benefits

The compulsory parts of the scheme are designed only to cover basic services. National lists have been issued of services for which no insurance benefits should be paid, or for which benefits should partly cover the charges. For example, cosmetic surgery will not be covered, but the charge for a cardiac pacemaker may be defrayed in part through the scheme. Both Western and traditional Chinese treatments are excluded or only partly covered. The current view is that there are both technical and cultural reasons for promoting a mix of the two systems (Hesketh and Zhu, 1997b).

Selection and contracting of health care providers

No care provider is allowed to operate unless it is licensed, and only a subset of licensed care providers will be designated (or contracted). If not designated, the care provider may deliver services, but no benefits will be paid.

Most cities have chosen to designate the majority of care providers. Hospitals at higher levels in the referral chain are almost certain to be designated, because of their perceived higher quality of care. The most likely reasons for failure to be designated are small size or narrow range of capabilities, inconvenience of location, or high charges for non-covered services (a common feature of privately owned hospitals).

Members are advised of the designated care providers, and then have the right to choose up to five in any one year, at least one of which must be a primary care provider. The restrictions are aimed at reducing administrative complexity, deterring excessive utilisation that is a consequence of the tendency to seek multiple opinions, and enhancing continuity of care.

It is surely wise to allow members some degree of choice of care providers. Experiences elsewhere show the dangers of failing to do so. For example, Tangcharoensathien, Supachutikul, and Lertiendumrong (1999) describe the difficulties that resulted in Thailand where employers rather than employees chose hospitals.

Billing and payment methods

Bills are mostly itemised. A schedule of items is used for ambulatory services, and care providers bill at mandated rates. The number of items varies from one Municipality to another, but is generally between 5000 and 8000. The same schedule is used for inpatient episodes, but with additions to cover days of accommodation and other institutional services.

The billing schedule has grown rapidly in recent years. One reason is technological change. Another is that splitting of items creates opportunities for higher levels of charging. For example, there may be separate items for 'subcutaneous injection' and for 'preparation of the skin' for the same injection. This degree of unbundling makes little sense, since the one item is always associated with the other. Many cities are employing clinicians with recent hospital experience to function as claims auditors. An obvious danger is that the auditors will become lost in the detail.

There is widespread recognition that itemised bills create many types of problems. Interest has therefore grown in the possibility of applying higher levels of bundling in recent years.

Several trials have been conducted. One design involved setting a fixed price for the entire admission, regardless of the type of care needed or received. An example is the trial conducted in Chengdu in 1994. An average charge was determined from previous experience and applied to nearly all types of inpatient episodes. The outcomes were much as might be expected. Expenditures were reduced, often at the expense of care. One senior official of a Municipal Labour Bureau noted that hospitals became "... unduly interested in pursuing increased profits". The trial was abandoned after less than a year.

There have been more trials of multi-class per case billing. They include an experiment in Dalian where selected hospitals are being paid a single amount per complete episode for around 30 admission types (roughly equating to DRGs). A similar study is under way in Beijing that involves six admission categories including renal dialysis and appendicectomy. In some cities, the initiative to move to per case billing has been taken by the health care providers. Their main interest was to respond to patients' desire to know charges (and consequently the level of copayments) in advance of admission.

Pricing of health care services

Prices are largely mandated by the government's Pricing Bureaus at provincial or municipal level. Price determination usually involves establishing relativities across different types of services from historical data, and then adjusting the prices themselves after analysis of overall income and expenditure levels of care providers.

Discussion

Many skilled and committed people are involved in implementing the new Scheme. It is likely to improve access, equity, efficiency, the quality of care, and value for money.

However, the task is inherently complicated. It will be impossible to attain the new Scheme's objectives to everyone's satisfaction, if only because many people have unreasonable expectations. For this and other reasons, several aspects of implementation will need to be managed with great care. The most important issues, in my opinion, are summarised below.

Handling the problems of employment-based insurance

China has some good short-term reasons using employment-based insurance, including weaknesses in its taxation systems. However, there are some disadvantages, compared with the single government insurance model. For example, Grogan (1995) notes that there are higher administrative costs, increased risks of social inequity, and practical limitations of the revenue base. This may be a particular concern in China, because personal salaries are becoming a smaller proportion of GNP (down from 17% to just over 10% during the last ten years).

Perhaps the most important problem is that there are additional barriers to the degree of integration of the health care sector. Most of China's successes in health care have originated in population-based strategies to health care financing and delivery, and it would be more consistent with history if the new scheme were fully integrated, at least at the LGA level (Hesketh and Zhu, 1997a).

Balancing government and private participation in insurance

The government will continue to be put under pressure to take a more market-oriented approach. Typical arguments are presented by Tanner (1999). *Inter alia*, he argues that China should make increased use of IHSAs for all but catastrophic events because insurance is "... an administratively costly mechanism for pre-paying the cost of health care" that encourages over-utilisation. He also argues that China should follow the lead of Chile and other countries, and allow the IHSAs to be managed for investment purposes by commercial companies. This will give workers the opportunity to become shareholders and "... thereby benefit by becoming an investor-owner." He seems not to appreciate that, in any government-owned scheme, all citizens are already shareholders. His approach would restrict ownership to the more wealthy members of society.

Most expert opinion supports the Chinese government position. For example, a group of the world's leading health economists advised China in 1993 to follow the lead of most of the established market economies and only use market mechanisms here and there when it is safe to do so, ensure that competition and markets remain means to an end rather than ends in themselves, and retain control in government hands. Finally, they argued that China should avoid the development of commercial health insurance. The only major market economy that has not done so, the USA, is "... desperately trying to escape from the negative consequences" (Ham 1996).

Competition and private participation in health care provision

With respect to health care provision, the Chinese government has decided that it will allow market competition but within a tight regulatory framework. It will continue to be the dominant provider of health care services, but is encouraging an internal market along the lines of the UK and New Zealand. It recognises problems of efficiency in the government sector, but has correctly judged (like most Australian health authorities) that improvements can be made without the need to sell off public assets.

There appear to be opportunities for the Municipal Labour Bureaus to make more use of their purchasing power to reward good performance. For example, they could decide to contract with a predetermined (and much smaller) proportion of hospitals and clinics. Another possibility is that of producing detailed performance reports on every hospital and clinic, and making them widely available for consultation by members.

In general, there are opportunities to increase supply-side incentives for efficiency. These could include increased use of per case payment, capitation of general practitioners to provide primary care, and use of clinical pathways as the basis for pricing and quality control (or even requiring their use as a condition of being contracted).

Refinements of service rationing

No government finds it easy to apply explicit rationing, and there are additional difficulties for developing economies like China. Ensor and Thompson (1998) point out that any sensible rationing policy will lead to an increased emphasis on primary and preventive care, but specialist medical and hospital services are "... cherished by both doctors and patients." The Chinese government has taken a bold and intelligent approach in the circumstances, but there are opportunities for continual improvement.

The new Scheme makes use of price signals for members, by providing only partial cover or none at all for services of low value for money. This is sensible, but there are two reservations. First, more should be done to control the costs borne by individuals out of their own pockets. If a health service is ineffective, the government should limit its use when obtained by self-pay or through commercial insurance, as well as through the new Scheme.

Second, members need access to more and better advice. As noted by Saltman (1997) and many other informed observers, copayments often do little to encourage efficiency. Nor do they always lead to long-term reductions in health care costs if only because members are encouraged to postpone care that has higher costs as the illness progresses. Liu and Hsiao (1995) studied insurance in China between 1978 and 1989 and concluded that increased levels of copayment "... had very little effect in containing cost escalation".

Management information systems

There is a long tradition of national systems of health information in China. However, some improvements will be needed over the next few years if the new Scheme is to be adequately managed. Areas needing attention include diagnosis and procedure classification and coding, classification systems for complete inpatient episodes, and the linking of billing and clinical information systems.

Increasing the use of primary health care and community health services

As noted by Dong (2000) and others, too much use is being made of hospital services. The government recognises the problem and is taking action. However, it will be difficult to break out of the cycle: the low quality of primary care services means that care providers' incomes and status is low, and low incomes and poor status mean that services continue to be of poor quality.

Possibilities that might be considered include increasing the price differentials (or even eliminating copayments altogether for non-hospital services), and giving grants to non-hospital service providers for such purposes as improving staff skills or upgrading the facilities. The status of general practitioners could be improved relative to hospital-based doctors if there were moves towards the use of GPs as gatekeepers to hospital services.

Long-term strategies for health care system integration

There are good reasons why separate insurance schemes are being created for the employed population in each city. However, it would be wise to develop a long-term strategy for increasing the degree of integration of the new Scheme with the rest of China's health care system by bridging the gaps between the cities, between the urban and rural populations, and between the employed and non-employed sections of the urban areas. Grogan (1995) argues that the separation of urban and rural health care systems "... is unnecessary and even counter-productive in light of the emerging integration of China's urban and rural economies". Hsiao (1995) presents a similar argument: financing, pricing, and organisational policies have been poorly coordinated in China and this has "... created serious dissonance in the system".

Relations between government agencies need to be managed with care. Although the Ministry of Labour and Social Security has primary responsibility for the financing of care for the urban employed, major responsibilities for health care still rest with other agencies and particularly with the Ministry of Health. This is not a demonstrably better or worse arrangement than that used in many other countries, whereby almost all aspects of health care are managed by a Ministry of Health. However, the Chinese model presents special risks to integration.

Postscript: good policies and major risks

The new Scheme is based on strategies that make sense in the current circumstances: a central design but devolution of operational responsibilities to municipalities, provision of adequate insurance to the whole of the urban employed population, balancing of economic and social goals, the blending of compulsory basic and optional additional insurance, and heavy reliance on demand-side controls of price and utilisation pending the development of more sophisticated supply-side incentives.

However, there are some risks. A particular danger is that for-profit agencies will try to reduce the degree of social equity. As they do in other countries, they are claiming that private companies are more efficient than government agencies, people should be given more freedom to choose whether (and how) they will be insured, the prices of health insurance and health care should be determined in the market place, any kind of government insurance will mean that people who have worked hard to accrue wealth will have to subsidise health care for the 'lazy and undeserving', and that government controls over health care will reduce the rate of economic growth. These are largely illogical claims, but they can be plausible and attractive to many people who have a poor understanding of the health sector. It is wise to be prepared to counter these arguments with logic and evidence.

Finally, there is a need to develop a common view about the longer term. The Municipal Labour Bureaus must implement a technically complicated and politically sensitive program, and it is understandable that the short term is the top priority. However, there are risks of decisions being made that may be sub-optimal for the longer term. The health care sector cannot be insulated from the rapid changes affecting the whole of Chinese society, but a shared vision of goals would significantly reduce the risks.

References

- Cai WW, Marks JS, Chen CH, et al 1998, 'Increased cesarean section rates and emerging patterns of health insurance in Shanghai, China', *Am J Public Health*, vol 88 no 5: pp 777-80.
- Carrin G, Ron A, Hui Y, et al 1999, 'The reform of the rural co-operative medical system in the People's Republic of China: interim experience in 14 pilot counties', *Soc Sci Med*, vol 48 no 7: pp 961-72.
- Chinese Ministry of Health 1997, '*Decision of the Central Committee of the Chinese Communist Party and the State Council on health reform and development*', Chinese Ministry of Health, Beijing, January 1997.
- Dong H, Bogg L, Rehnberg C, Diwan V 1999, '*Health financing policies - providers' opinions and prescribing behaviour in rural China*', *Int J Technol Assess Health Care*, vol 15 no 4: pp 686-98.
- Dong Y 2000, 'Community Health Services in China: the experience of Tianjin City', *Australian Health Review*, vol 23 no 3.
- Ensor T and Thompson R 1998, 'Health insurance as a catalyst to change in former communist countries?', *Health Policy*, vol 43, pp 203-218.
- Grogan CM 1995, 'Urban economic reform and access to health care coverage in the People's Republic of China', *Soc Sci Med*, vol 41 no 8, pp 1073-1084.
- Ham C 1996, in '*Fixing health budgets: experience from Europe and North America*', Schwartz FW, Glennerster H, and Saltman RB (eds), p60. John Wiley and Sons.
- Henderson GE, Akin JS, Hutchinson PM, Jin SG, Wang JM, Dietrich J, & Mao LM 1998, 'Trends in health services utilisation in eight provinces in China, 1989-1993', *Soc Sci Med*, vol 47 no 12: pp 1957-71..
- Hesketh T and Zhu WX 1997a, 'Maternal and child health in China', *BMJ*, 314(7098): pp 1898-900.
- Hesketh T and Zhu WX 1997b, 'Health in China. Traditional Chinese medicine: one country, two systems', *BMJ*, 315(7100): pp 115-7.
- Hillier S & Shen J 1996. 'Health care systems in transition: People's Republic of China. Part I: an overview of China's health care system', *Journal of Public Health Medicine*, vol 18 no 3, pp 258-265.
- Ho LS 1995, 'Market reforms and China's health care system', *Soc Sci Med*, vol 41 no 8: pp 1065-72.
- Hsiao WC 1995, 'The Chinese health care system: lessons for other nations', *Soc Sci Med* 1995 Oct; 41(8):1047-55.
- Hu TW, Ong M, Lin ZH, Li E 1999, 'The effects of economic reform on health insurance and the financial burden for urban workers in China', *Health Econ*, vol 8 no 4: pp309-21.
- Lee AHY & Shao RCW 2000, 'Health insurance report on China', *Benefits and Compensation International*, Jan-Feb 2000, pp 19-20.
- Liu X, Hsiao WC 1995, 'The cost escalation of social health insurance plans in China: its implication for public policy', *Soc Sci Med* 1995 Oct; 41(8):1095-101.
- Liu G, Liu X, and Meng Q 1994, 'Privatisation of the medical market in socialist China: a historical approach', *Health Policy*, vol 27, pp 157-174.
- Liu Y, Hsiao WC, and Eggleston K 1999, 'Equity in health and health care: the Chinese experience', *Soc Sci Med*, vol 49 no 10: pp 1349-56.
- Liu Y, Hsiao WC, Li Q, Liu X, Ren M 1995, 'Transformation of China's rural health care financing', *Soc Sci Med*, vol 41 no 8:1085-93.
- MOLSS 1999, '*Directives on the establishment of the Basic Medical Treatment insurance scheme*', Ministry of Labour and Social Security, Beijing.

Roemer MI 1997, 'Social insurance for health service', *Scand J Soc Med*, vol 25 no 2: pp 65-6.

Saltman RB 1997, 'Equity and distributive justice in European health care reform', *Int J Health Serv*, vol 27 no 3: pp 443-53.

State Council 1998, '*Decision of the State Council on establishment of the basic medical insurance system for urban employees*', State Council of the People's Republic of China, Beijing.

Tangcharoensathien V, Supachutikul A, and Lertiendumrong J 1999, 'The social security scheme in Thailand: what lessons can be drawn?', *Social Science and Medicine*, vol 48 no 7; pp 913-924.

Tanner M 1999, 'Private provision of retirement security and health care', available through <http://www.cato.org/events/china/papers/tanner.html>.

Zheng X and Hillier S 1995, 'The reforms of the Chinese health care system: county level changes - the Jiangxi Study', *Soc Sci Med*, vol 41 no 8: pp 1057-64.