

PRIMARY HEALTH CARE MEETS THE MARKET: LESSONS FROM CHINA AND VIETNAM¹

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Summary

Many low and middle income countries are considering radical health sector reforms. Their policy-makers are asking fundamental questions about how services should be financed, the relationship between service providers and government, and the role of the state in ensuring that health services are cost-effective and equitable. This paper outlines some lessons they can learn from China and Vietnam. Both countries developed low cost rural health services during the period between the early 1950s and the mid-1970s. Their example strongly influenced international health policy. However, other countries did not give adequate consideration to how to adapt structures developed in egalitarian command economies for market economies with substantial socio-economic inequalities. China and Vietnam have been liberalising their economies for several years. This has affected their health services in a number of ways. Those who can afford them have a wider choice of health services, but costs have risen and there are greater differences in access to medical care. The Chinese and Vietnamese governments are seeking strategies to make their health services more cost-effective and equitable. Policy-makers and researchers in low and middle income countries can learn useful lessons from their efforts to adapt their services during the transition to a market economy.

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1. THE IMPORTANCE OF THE CHINESE AND VIETNAMESE EXPERIENCES

Since the late 1970s there has been an international consensus that primary health care is the best strategy for addressing the health problems of low and middle income countries with large rural populations. Most governments and international donors have based their health policies on primary health care. The primary health care strategy was heavily influenced by models of health sector organisation developed by China and Vietnam during the 1960s and 1970s. Both countries demonstrated that health services could be extended rapidly to a rural population at relatively low cost, and they still have better health indicators than countries with much higher average incomes (Table 1). Laos attempted to create a similar health sector, however, because of political instability and war, it did not consolidate effective services during the period of the command economy (Holland et al 1995). The success of China and Vietnam strongly influenced international health policy.

Table 1: Basic health indicators for 1993

| | GNP per capita, 1994 US\$ | Proportion of children immunised against DPT ¹ % | Life expectancy | Infant mortality (1/1000) | Maternal mortality (1/100,000) |
|------------|---------------------------|---|-----------------|---------------------------|--------------------------------|
| Bangladesh | 220 | 74 | 53 | 107 | >500 |
| China | 530 | 95 | 71 | 27 | 100-249 |
| Indonesia | 880 | 89 | 63 | 65 | 250-499 |
| Laos | 320 | 25 | 51 | 96 | >500 |
| Thailand | 2410 | 88 | 69 | 27 | 100-249 |
| Vietnam | 200 | 91 | 65 | 38 | 100-249 |

1. Diphtheria, pertussis, and tetanus

Source: World Health Report 1995, World Development Report 1996

A number of factors contributed to health improvements in China and Vietnam: almost everyone had a job or access to land; food was transferred to regions that suffered production failures; measures were taken to diminish some environmental hazards linked to the transmission of infectious diseases; and educational levels were raised substantially. Although all of the above contributed to health improvements, specific preventive programmes and the almost universal access to basic curative services were also important.

Effective health services contributed to development and poverty reduction, in addition to reducing suffering and premature death. They did this by diminishing productivity losses due to ill health, reducing the loss of skilled workers due to chronic illness, increasing the capacity of school children to learn, and diminishing the frequency and intensity of health shocks which reduce household income and cause increased expenditure. It could be argued that the previous investment in health and health services helped create a situation in which

rural households could increase production rapidly when China and Vietnam liberalised their economies.

Many countries have not experienced the same health improvements as China and Vietnam, in spite of investing heavily in the health sector (Lafond 1995; World Bank 1993). This is partly due to factors outside the health sector, but it has led to doubts about whether a strategy developed in egalitarian command economies is applicable to market economies with large income inequalities. Policy-makers in low and middle income countries are asking fundamental questions about how they should organise the health sector (Berman 1995). China and Vietnam are asking the same questions as they transform themselves into 'socialist market economies'.

This paper outlines some ideas that are emerging from China and Vietnam's experience in adapting their health sectors during the transition to a market economy. Section 2 describes how the two countries' health sectors were organised during the period of the command economy. Section 3 describes how the transition to a market economy has influenced the organisation of the health sector, and section 4 discusses how the organisational changes have influenced health sector performance. Section 5 concludes the paper by highlighting some issues that health sector reform strategies have to address in China, Vietnam and other low and middle income countries.

2. HEALTH SERVICES IN CHINA AND VIETNAM PRIOR TO THE 1980s

2.1 The economic and institutional context

The Chinese and Vietnamese command economies were structured similarly. The rural areas were organised into communes, the units of collective production. The communes retained a portion of output to fund administrative activities and basic social services and distributed the balance to the members of the collective.

The state played a predominant role in the production of non-agricultural goods and services. It fixed salaries and prices and set production targets. Lower levels of government and individual enterprises were expected to meet targets and remit profits to higher levels of government.

The Communist Party held a virtual monopoly of political power and its structures extended to almost every village. It came to power in China after a prolonged period of "people's war" in which mass mobilisation played a key role; and it continued to organise a variety of mass campaigns, particularly during the Cultural Revolution of the 1960s and 1970s. It organised Vietnam for people's war, to a greater or lesser extent, until 1975.

2.2 Health policy framework

Prior to the 1980s both countries gave high priority to health. They had similar health policies that favoured prevention over curative care, integrated traditional and Western medicine, and linked health work with mass movements (Tang et al 1994; Guldner and Rifkin 1995). The health sectors that resulted from the implementation of these policies strongly reflected the two countries' economic and institutional structures.

2.3 Major components of health development in China and Vietnam

2.3.1 Construction of infrastructure and training of personnel China and Vietnam built many hospitals and health centres (Table 2). They also constructed a network of primary care facilities (village health stations in China and commune health centres in Vietnam). By the mid-1970s most of the population lived near a health facility. Recent surveys illustrate the density of the health service networks. Li et al (1997) found that 62% of people travelled less than half an hour to see a health worker in three poor rural counties of China, and Ensor and San (1996) found that most households lived within a 14 minute walk of a health worker in four rural districts of Vietnam.

Table 2: Growth in infrastructure and personnel in China and Vietnam

| | Hospital beds per 1000 population ¹ | Population per Western doctor | Population per Western doctor/ assistant doctor |
|----------------|--|-------------------------------|---|
| China | | | |
| 1952 | 0.3 | 11,100 | 4,862 |
| 1975 | 1.7 | 3,155 | 1,424 |
| late 1980s | 2.6 | 1,219 | 876 |
| Vietnam | | | |
| 1945 | 0.2 | 352,949 | - |
| 1975 | 2.8 | 3,816 | - |
| late 1980s | 3.3 | 2,700 | 1,800 |

1. In China this includes beds in health centres, which are similar to Vietnamese district hospitals

Sources: Gong and Wilkes 1997, Guldner 1995, Tang et al. 1994, World Bank 1993

Both countries trained many Western doctors and assistant doctors (with 3 years training after leaving school). By the late 1980s the population per doctor/assistant doctor had fallen to 876 in China and 1,800 in Vietnam. They also trained many village health workers (China's barefoot doctors and Vietnam's brigade nurses). These were peasants who received some training and returned to work as part-time health workers. They led public health campaigns and provided basic preventive and curative services.

2.3.2 Creation of a health management system China and Vietnam established multi-tiered health systems that corresponded to the levels of government (provinces, prefectures and cities, and counties in China; provinces and districts in Vietnam). The higher levels provided specialised referral services and supervised lower levels. Chinese counties and Vietnamese provinces organised training programmes and public health campaigns and ran modest hospitals. Most Chinese communes had a health centre that provided outpatient and inpatient care and organised preventive programmes; Vietnamese district hospitals had similar functions. Most Chinese villages and Vietnamese communes had a health facility with a small number of full or part-time village health workers. Part-time health workers were also based in hamlets that did not have a facility. This hierarchical management system made it possible to extend health services rapidly to most localities.

The preventive programmes were the most successful aspect of the vertical management system. Each programme formulated guidelines and set targets. These programmes were monitored by local political cadres and by special units of the health departments of higher levels of government. The curative services were less carefully supervised (Guldner 1995)

2.3.3 Community mobilisation Both countries mobilised large numbers of people in public health campaigns to eliminate vermin, clean up the environment, and so forth. These campaigns were led jointly by health workers and political cadres. The communes paid people for time they spent on public health campaigns in the same way that they paid for all other work. Both countries emphasised non-economic incentives. Health workers who put personal interest above the health needs of the population, or peasants who did not participate in campaigns, could be punished by local political leaders.

2.3.4 System of health finance The Chinese and Vietnamese systems of health finance were different. Vietnam created a national health service which provided most services free of charge. The government financed preventive programmes and government health facilities, and the communes financed commune health centres and brigade nurses. Patients paid for their own drugs.

China created a more complex health sector, in which government provided only 28% of total health expenditure in 1978, excluding the cost of health care for public sector workers (World Bank 1996a). It funded investments in training, buildings and equipment, it paid for the preventive programmes, and it paid salaries and some operating costs of government hospitals and health centres.³ Government health facilities provided preventive services free of charge but they charged for consultations, treatment, drugs, dressings, and other

³ The government funded only half of the budgets of a sample of 3 county hospitals in 1981 (Bloom et al 1995)

consumables. Most people paid these charges out-of-pocket, but the government and state-owned enterprises paid for their own employees and, in some cases, their dependants. Work-related health insurance schemes accounted for 30% of total health expenditure in 1978.

The communes were an important source of rural health finance. They paid the salaries of local health workers and financed some of the operating costs of commune health centres and village health stations. Patients paid fees, as in government facilities. Most communes had cooperative medical schemes, which reimbursed a proportion of the cost of medical care (Tang et al 1994). In 1978 these schemes provided 20% of total health expenditure in China. The remainder of health sector finance came from out-of-pocket payments (20%) and other sources (2%) (World Bank 1996a).

Neither China nor Vietnam provided fully equitable access to health services. The greatest differences were between urban and rural areas. China's government and state-owned enterprises spent much more than average on health services for their employees; health services cost three times as much per person in urban than in rural areas in 1981 (Prescott and Jamison 1984). Vietnam also favoured the urban population, who had preferential access to the more sophisticated hospitals.

2.4 The Chinese and Vietnamese models of sectoral organisation

China and Vietnam had tightly organised systems which combined hierarchical bureaucratic controls with close political supervision and popular mobilisation. Within 20 years this system provided almost the entire population with basic preventive and curative health services.

Both countries continued to expand their health services after they achieved basic access targets. Smithson (1995) suggests that this overstretched Vietnam's limited public health budget and exacerbated the squeeze on operational expenses and maintenance when public finance was constrained during the 1980s. Similarly, health facilities in poor counties of China spent too little on maintenance, equipment and operating costs whilst hiring more staff (Bloom et al 1995).

The emphasis on quantity at the expense of quality has been particularly marked regarding health workers (Gong and Wilkes 1997). Training institutes continued to produce large numbers of semi-skilled personnel long after the acute shortages had been relieved. By the early 1990s, most health facilities employed large numbers of assistant doctors and partially trained health workers who had very low workloads. In addition, most villages had at least one village health worker or drug seller. Most people had easy access to a health worker, but many of the health workers had limited skills.

There were no formal evaluations of the quality of health services during the 1960s and 1970s. However some analysts have inferred from the rapid changes in the pattern of utilisation of services during the 1980s that people had not been entirely satisfied with the services. These changes include a drop in utilisation of public health services after private practice was legalised in Vietnam and the collapse of most of China's cooperative medical schemes (Wolffers 1995 and Feng et al 1995).

By the end of the 1970s China and Vietnam faced major challenges to consolidate their expanded health systems and improve the quality of services. This was complicated by the need to adapt to radical changes in the economy and system of public administration. Section 3 discusses how these changes affected the health system.

3. THE IMPACT OF ECONOMIC REFORMS ON THE HEALTH SYSTEM

3.1 The economic reforms

China has been evolving into a socialist market economy since the early 1980s. This has involved a shift from collective to household agricultural production; phasing out of price controls; reform of state-owned enterprises; creation of a labour market; development of new forms of enterprise ownership; and devolution of tax authority and public sector financial management. The transition has taken place against a background of rapid economic growth, in which the gross national product increased by 9.4% a year, in real terms, between 1978 and 1995 (World Bank 1996b).

Vietnam's transition to a market economy has been complicated by the need to integrate the southern part of the country into the economy while managing post-war reconstruction (Smithson 1993). For a number of years it was isolated from the international community and had little foreign assistance. The economy grew only 0.4% a year between 1975 and 1980. Vietnam began to introduce economic reforms in 1979 and these were accelerated after the 6th Party Congress proclaimed the so-called *doi moi* policy in 1986. The growth rate was 6.4% a year in the first half of the 1980s and 7.1% a year between 1986 and 1995 (EIU 1995; World Bank 1996b).

Vietnam's per capita GNP was US\$200 in 1994 and China's was US\$530. The proportion of the population with incomes below the poverty line in 1993 was 55% in Vietnam and 7% in China (World Bank 1996a and 1996b). These differences in income have influenced the health sector's response to economic and institutional reforms. The same applies to regional differences within each country; China's health sector has been affected quite differently in rich and poor areas.

3.2 Decreased reliance on state and collective funding

Government health expenditure has risen more quickly than the rate of inflation in both countries. However, other sources of health expenditure have increased much more rapidly. In 1993 government funded only 14% of total health expenditure in China and 16% in Vietnam (Table 3).

Table 3: Sources of finance for health services China and Vietnam in 1993

| | Government | Non-government | | | | Total |
|---------|------------|----------------|------------------------|-----------------|-------|----------|
| | | Households | Work-related insurance | Rural insurance | Other | |
| China | 14% | 42% | 36% | 2% | 6% | 3.8% GDP |
| Vietnam | 16% | n.a. | n.a. | n.a. | n.a. | 4% GDP |

Sources: World Bank (1995 and 1996a), UNDP (1995)

Chinese health facilities have charged for services for decades. The government has kept prices of routine consultations, treatments and inpatient services low, on grounds of equity. However, as government has provided a decreasing share of health funding, it has allowed health facilities to compensate by selling drugs at a profit (a 15-20% mark-up) and by setting high charges for certain investigations and treatments. A recent study in three poor Chinese counties found that government grants funded less than a quarter of the budgets of hospitals and health centres (Bloom et al 1995).

Vietnamese health facilities were supposed to provide free services prior to 1989, although patients paid for drugs, at a price that included a 5-15% mark-up. Since 1989 government and commune health facilities have been allowed to charge fees. Studies at the beginning of the 1990s found that health centres received from as little as 27% to as much as 77% of total expenditure from their local commune (Smithson 1993 and Tipping et al 1995).

Chinese government and state-owned enterprises have provided their employees with health insurance as a fringe benefit since the 1950s. Disbursements by these funds rose rapidly during the 1980s (Liu and Hsiao 1995). In 1993 these schemes covered 15% of the population and accounted for 36% of health spending (World Bank 1996a). Vietnam introduced compulsory medical insurance for government employees and workers in state enterprises in 1993 (Ensor and San 1996). This scheme covers 9% of the population.

One of the most dramatic changes to China's system of health finance has been the disappearance of most of the cooperative medical schemes. They covered 85% of villages in the late 1970s and financed 20% of total health expenditure. In 1993 they covered less than

10% of villages and financed 2% of total health expenditure. The majority of village health workers earn most of their health-related income from charges for curative care and profits from drug sales.

Previously, Vietnam's communes financed the running costs of commune health centres and the salaries of village health workers. Most communes no longer pay the brigade nurses and they provide relatively small grants to the health centres. Since 1993/94 the state has paid the salaries of some health centre staff. Some communes have established experimental community financing schemes, often with donor support, as a means of increasing health finance (Ensor and San 1996).

Individual households pay a substantial share of the total cost of health services, themselves. Out-of-pocket payments accounted for 42% of total health expenditure in China and a larger proportion in Vietnam (Table 3).

3.3 Increased autonomy of health facilities

Health facilities have much more autonomy than under the command and control system. There is a wide variety of relationships between government and health service providers including officially licensed private practitioners, informal private practitioners who see patients legally but who do not work within a clear regulatory framework, and public health facilities which receive government grants but are subject to little administrative and political control.

3.3% of China's qualified health workers were registered private practitioners in 1990 and an unknown number of public sector doctors worked part time in private facilities or in other public hospitals (Liu et al 1994). Vietnam has over 5000 licensed Western medicine clinics and 2000 traditional medicine clinics, largely concentrated in the urban centres (Dung 1996). In addition many public sector health workers see patients in their spare time. According to Witter (1996), part-time private practice is an important source of income for many government health workers. This may account for the finding of a 1992 survey that only one third of doctors who saw patients privately were licensed private practitioners (Dung 1996).

Most hospitals and health centres in China and Vietnam are publicly-owned.⁴ None the less, they have a lot of freedom to act in their own interest. This is particularly the case in China, where they generate most of their revenue and decide how to allocate it. The more they earn, the more they can pay their employees. They invest surpluses in equipment and other improvements that will generate future revenue. Government does not intervene in day to day

⁴ In 1990 China had 110 private hospitals (Liu et al 1994) and a few years later Vietnam had 2 (Dung 1996).

management, and political leaders do not usually interfere in their operation. It is difficult accurately to model the behaviour of health facilities. Chinese facilities appear to give priority to retaining staff and increasing their salaries. It is unclear what motivates health facility managers in Vietnam, where government funds a larger share of facility budgets, but public sector doctors earn much of their income from part-time private practice or non-medical activities.

China's specialised preventive institutes are no longer fully funded by government. According to a recent survey, the county anti-epidemic stations raised 56% of their budgets themselves and the county maternal and child health centres raised 67%.⁵ The sources of income include: charges for preventive services, earnings from specialised services (laboratory tests, examinations of restaurant employees, and so forth), and revenue from general outpatient and inpatient services. The change in the system of funding has led some institutions to neglect rural preventive programmes, but others continue to improve their preventive work. Vietnam does not permit preventive institutes to generate revenue. The government does not fund the preventive services very well and it is not clear how this has affected their performance and that of their employees, whose strategies for supplementing their incomes are not well understood.

Both countries have many informal private health practitioners. Some simply sell drugs and others also provide preventive and curative health services. Everyone can sell almost any pharmaceutical product. China regulates only narcotics and major tranquillisers. It has a wide variety of drug sellers, including ex-village health workers (Zhan et al 1997). Vietnam has more than 7000 licensed drug dealers and pharmacies, mostly run by unqualified staff (Dung 1996; Wolffers 1995).

The role of village health workers, who were previously paid out of collective funds, has changed considerably. When household agricultural production was introduced the village administrations lost their ability to withhold a share of output to fund local services, and most of them no longer pay local health workers a salary. Some villages in the more developed parts of China, where local administrations generate a lot of revenue from non-agricultural enterprises, and a few villages elsewhere in China and in Vietnam still pay local health workers (Tang et al 1994; Tipping and Truong 1997). These health workers function much as before.

Most village health workers no longer receive a salary. Some have quit health work and the rest earn most of their health-related income from charging fees to patients, and selling drugs

⁵ MoH (1994) as cited in Shu and Yao (1997)

(Deng et al 1997). In 1990 47.5% of China's village clinics were private (Liu et al 1994). Many of the other clinics were leased to local health workers who operated like private practitioners. Village health workers now compete for patients with health centres and other sellers of drugs and providers of health services. They spend less time, than previously, on prevention and health promotion.

3.4 Decentralisation of government system

China has decentralised its public administration and finance. It has also established townships, as a new level of government, to undertake the administrative duties previously performed by communes. Vietnam has made fewer changes to its system of public administration. Its communes are not a level of government, but they are officially recognised as cooperative bodies.

Higher levels of government in China have little direct influence over lower levels (Wong et al 1995). Lower levels of government still submit budgets to higher levels, but they have a great deal of freedom over how they use their own funds. Each level of government collects taxes and transfers a portion of them to higher levels. The poorest localities receive net transfers from higher levels. The size of these transfers has diminished as a proportion of total government expenditure. Each level of government is responsible for its own health services: provincial governments finance provincial referral hospitals and specialised institutions; county governments finance county hospitals and preventive institutes; and township governments finance township health centres. Health departments provide very little money to health facilities belonging to a lower tier of government.

Higher levels of government in Vietnam have retained some power over how lower levels use resources (Smithson 1993). For example, all provincial and district governments must provide fixed minimum levels of funding for preventive programmes and per hospital bed. These norm-based funding formulae account for a substantial share of the total health budgets of the poorer localities. Governments of richer areas can spend additional funds on local health services, if they wish.

3.5 Moves towards a labour market

Both countries have modified the previous labour management system which guaranteed skilled personnel a job, but only in the post they were assigned. Health workers can change jobs or go into private practice. This has led many skilled personnel to leave poor rural areas (Gong and Wilkes 1997; Guldner 1995).

There are considerable differences in the experiences of rural health facilities in China and Vietnam. In China, township governments are responsible for rural health centres, and people working in them are government employees. Government personnel bureaux assign new graduates to work in these facilities. The government provides almost no money to village health stations. Vietnam's government has not taken over responsibility for the commune health centres, which are analogous to China's village health stations. Many of them have lost health workers. The government has recently decided to pay the salaries of 3-5 health workers at each facility in order to ensure at least minimal staffing levels (Tipping and Truong 1997). It does not provide funds for other village health workers.

3.6 Decreased political mobilisation

China no longer organises mass public health campaigns. This is partly a reaction against political mobilisation which is associated with the Cultural Revolution. In addition, most localities no longer pay people for time spent on these campaigns. There has been a change in political priorities away from the provision of basic services, towards promotion of economic growth and establishment of new sources of local government revenue. Politicians are less interested in health and are less rigorous in monitoring the performance of local health workers.

Vietnam never mobilised its population as intensively as China, and there has been less reaction against community actions. Government still depends on voluntary labour, as a recent government decree requesting communities to work without pay on the new national highway illustrates.

3.7 Summary

The health sectors of China and Vietnam have changed considerably in response to economic and institutional reforms. The changes are particularly great in China, where health facilities generate a large proportion of their budgets from non-government sources and where the level of health worker pay depends on the ability of their employer to generate revenue. Government has less capacity to supervise health facilities, and it has little incentive to do so. There is much less political control over the health system. As a result of these changes providers and users of health services are more responsive to financial incentives than previously. The following section describes how these changes have affected health sector performance.

4. CHANGES IN HEALTH SYSTEM PERFORMANCE

4.1 Rises in the cost of health services

Health expenditure grew by 10.9% a year between 1978 and 1993 in China (World Bank 1996a). According to UNDP estimates, real health expenditure more than tripled between 1989 and 1993 in Vietnam (UNDP 1995). These rapid rises in medical expenditure have resulted in improvements in medical care for those who can afford to pay; they have also financed increases in the cost of inputs and decreases in operational efficiency.

4.1.1 Increases in health worker pay Average real wages of employees in health care, sports and social welfare almost tripled between 1978 and 1994 in China.⁶ These changes, which were similar to those in other sectors, were due to increases in basic pay and bonuses. Until 1994, when basic salaries were substantially increased, most health facilities paid at least the basic government salary, and the more successful ones added a bonus. Since then governments in poor counties can no longer afford to pay basic salaries.⁷ A job as a government health worker pays more than average agricultural earnings in poor localities. This has resulted in an increase in the relative cost of health services for the poor.

Real wages of health workers fell in Vietnam during the 1980s. They have risen during the 1990s, even after monetisation of fringe benefits is taken into account. In addition, government health workers in Vietnam have increasing opportunities to supplement their income from private practice.

4.1.2 Unnecessary cost increases Drug expenditure has risen very rapidly in both countries and drug purchases account for over half of expenditure on rural health services. There are disagreements about the importance of rises in drug prices as opposed to changes in prescribing practices. However, there are good reasons to believe that overuse of drugs has become a serious problem (Zhan et al 1997; Wolfers 1995). Profits from the sale of drugs have become an important source of income for health workers in both countries. This has created a powerful incentive to increase the volume of sales.

Another source of cost increases is the rapid acquisition by Chinese health facilities of new and expensive technologies. They are permitted to charge fees that enable them to earn substantial profits from this equipment. Some facilities organise investor groups to purchase

⁶ Between 1978 and 1994 the average wage in health, sports and social services rose from ¥573 to ¥5115 while the RPI rose from 100 to 313 (SSB 1995, pages 23 and 45).⁶ The rise in real income overstates the improvement in living standards because it does not take into account the fact that people have to pay for services that were previously provided free of charge.

⁷ For example, one county in Henan Province paid 60% of basic salary to its health workers in 1996.

equipment. Health facilities in areas where a large proportion of the population has health insurance have been particularly successful in acquiring new equipment. Health facilities have much less sophisticated equipment in Vietnam. This may reflect the lower incomes of the population and the fact that rapid economic growth began later than in China.

4.2 Increased inequality in access to services

Income inequalities are increasing in both countries (World Bank 1996b). There are marked differences in China between regions that have experienced rapid growth for a number of years and regions that have grown more slowly. Most poor households live in the slow-growing regions. Vietnam also has differences in economic levels between north and south and between remote districts and the rest of the country. One aspect of these socio-economic inequalities is an increased inequality in access to health services.

4.2.1 Geographical inequalities in health services Health expenditure is increasing most rapidly in urban areas. A large proportion of people in China's cities are covered by work-related health insurance which pays health facilities on a fee-for-service basis. This has encouraged hospitals to provide costly forms of care that depend increasingly on sophisticated technology and the use of expensive drugs. The claims on work-related insurance schemes have increased rapidly (Liu and Hsiao 1995). By 1989 urban health services cost five times as much per person as those in the rural areas, compared to three times as much in 1981 (Yu 1992). The differences have continued to grow.

There are no similar data on the differential development of urban health services in Vietnam. However, Witter (1996) reports that a disproportionate share of government health expenditure is allocated to urban hospitals and that private practitioners tend to be based in the cities. The newly introduced compulsory health insurance, which will mostly cover city people, will encourage further divergence between urban and rural health services.

The rapid development of a hospital-based service in the cities has affected China's rural health services. The most qualified health workers have left rural facilities to work in the urban areas. Rural health workers are influenced by what they perceive as the 'gold standard' of medical practice and users of health services seek 'modern' medical care. Many rural facilities have invested in equipment to compete for patients. Suppliers of medical equipment and drugs advertise their products and they may offer financial inducements to buyers. The effect has been to spread a costly style of medical care. Witter (1997) suggests that a similar process is under way in Vietnam.

The situation is different in the poorer regions. Health services in many poor localities show signs of chronic under-funding: run down and poorly equipped health facilities, shortages of

skilled personnel, and lack of supervision and in-service training for front-line personnel. The number of outpatient visits to China's township health centres fell by 25% between 1986 and 1993; and the number of outpatient consultations at Vietnam's public health facilities fell by over 50% per capita between 1987 and 1993 (Tang 1997; Tipping and Truong 1997). There are several reasons for this fall in utilisation: a deterioration in the quality of services provided by township and commune level facilities due to loss of skilled personnel and shortages of equipment; a rise in charges to users; and competition from drug sellers and formal and informal private practitioners. Household surveys in both countries show that rural people purchase drugs from a drug seller or see a private practitioner during a high proportion of illness episodes (Yu et al 1997; Ensor and San 1996; Tipping et al 1995). The marketisation of basic rural health services has widened the variety of providers from which people can choose, however, it has exposed them to greater risk of low quality care and it has created financial barriers that prevent the poor from gaining access to effective services.

4.2.2 Access to services by the poor Recent surveys in China and Vietnam have found that a high proportion of rural people consult a health worker when they are ill (MoH 1994; Ensor and San 1996). This suggests that access to basic health services is reasonably good. However, the consultation may be with a poorly trained village health worker or drug seller. The poor are less likely to consult a qualified doctor (Croll 1994) and they may find it difficult to pay for a full course of drugs.⁸

Average health expenditure is an indication of access to medical care. The richest quartile of China's rural population spend 3.2 times as much on health services as the poorest quartile (World Bank 1996a). The poorest eighth of the population, whose incomes are below the poverty level, spend a tenth as much on health as the richest quartile.⁹ According to Chen and Heibert (1994), the Vietnam Living Standards Survey of 1994 shows similar levels of inequality, with the highest quintile of the population spending 4.6 times as much on health than the lowest quintile.

Medical care charges have become a financial burden for poor households. Zhan et al (1997) show that people in poor rural China spend between 2 and 5 times the average daily per capita income on an average prescription. The Vietnam Living Standards Survey estimates that a visit to a commune health centre costs 8% of the annual non-food consumption of a poor family (State Planning Committee 1994).

⁸ A particularly unfortunate example is the treatment of tuberculosis which requires the use of drugs for an extended period of time. There are reports of people who only purchase a shorter period of treatment and go on to develop serious complications. The government now favours the provision of tuberculosis drugs at highly subsidised prices.

⁹ World Bank (1996a) Table 1.6

Households find it particularly difficult to pay for treatment of a seriously ill family member. Up to half of those referred to hospital in poor counties of China do not receive inpatient treatment, and a substantial proportion give cost as the reason (Tang et al 1994). Yu et. al. (1997) found that an average hospital admission cost almost 60% of the annual net income of poor households. They also found that almost half of poor households which had a family member admitted to hospital borrowed money. The Vietnam Living Standards Survey found that an admission to a commune health station cost 45% of a poor family's annual non-food consumption. Ensor and San (1996) found that half of poor households with a family member who had medical care borrowed money or sold livestock. A serious illness can trigger a cumulative process of increasing debts and asset sales which ultimately leaves the household destitute. This is believed to be an important cause of poverty in China (Chen 1994).

In theory, the social relief systems of China and Vietnam should guarantee access to medical care, but, in practice, the situation is different. China subsidises some preventive programmes, but health facilities charge for all other services. The government finances some social relief for the poor. However, it does not allocate much money for this purpose and very little is spent on medical care. Village welfare funds also pay for health care for the very poor. This system works reasonably well in the rapidly developing parts of the country, where government and local administrations can raise enough revenue to finance a safety net for the poor, but poor localities provide very little medical relief.

Vietnam provides a number of services free, or at a greatly subsidised price. These include health care for children under the age of six and the treatment of tuberculosis, goitre, malaria and leprosy (Tipping and Truong 1997). There is no official policy of exempting people with other health problems from fees at commune health centres. Ensor and San (1995) found that only 6 of 32 communes did so. The same authors report that hospitals were more likely to exempt some patients, although this applied to only a small number of people.

4.3 Uneven development of the preventive services

There are increasing inter-regional differences in preventive services in China. The incidence of infectious disease has continued to fall in the more developed regions. In these areas the major causes of preventable disease are related to chronic exposure to risks such as tobacco, alcohol, and environmental pollution. The preventive programmes are less successful in the poor areas. One sign of this is the resurgence of preventable illnesses such as tuberculosis and schistosomiasis. Infant mortality and maternal mortality are much higher in these areas. Shu and Yao (1997) found that almost all babies were delivered at home by untrained personnel in one poor county, and only a small percentage of pregnant women had any ante-natal care. Coverage by the immunisation programme had fallen considerably in the same county. This

suggests that the preventive programmes have begun to show the effect of prolonged financial pressures.

Vietnam still funds its preventive programmes fully, and the services are provided free of charge. These programmes have maintained high levels of coverage. However, the number of cases and deaths from malaria appear to have risen between 1980 and 1990 (Guldner 1995). The government allocates only 3% of its health budget to prevention and donors have become an important source of finance (World Bank 1995). This raises questions about the sustainability of the preventive services.

4.4 Summary

In China and Vietnam prior to the economic reforms, health services were largely financed by government and the units of collective agriculture. Health facilities were induced to provide basic preventive and curative services at an affordable cost by a combination of close supervision by government health personnel and local political leaders, and an ethos that strongly discouraged opportunism. The relationships between health workers, health facilities, government and institutions of local accountability have altered during the transition to a market economy. This has encouraged health service providers to favour curative care over prevention and to supply expensive drugs and sophisticated technologies to those who can afford to pay.

The impact of these changes on the population's health is not fully understood. Childhood mortality fell rapidly in China during the 1960s and early 1970s, but it has not fallen much since the mid-1970s (World Bank 1996a). On the other hand, life expectancy has continued to rise slowly (World Bank 1996b). Infant mortality rates have continued to fall slowly in Vietnam and life expectancy has continued to rise (World Bank 1996b). However, there is evidence of a resurgence of some preventable illnesses in the poorer regions of both countries (Section 4.3). There is a need for more detailed information on sub-national mortality trends. It is particularly important to know more about what is happening to people living in poor areas, where health services are experiencing serious problems.

5. RESTRUCTURING THE HEALTH SECTOR

The Chinese and Vietnamese governments have begun to address the problems described above. China's State Council convened its first ever National Health Policy Conference in December 1996, attended by provincial governors and representatives from the relevant national ministries. The Vietnamese government has passed a number of new laws and regulations concerning the health sector. This section outlines some of the issues that reform strategies have to address.

The health services of many other low and middle income countries have been funded and provided mostly by government. However, some health sectors are functioning less and less like the command and control model. The reasons for this include a decrease in government funding due to economic crisis, the transition to a market economy or the introduction of a structural adjustment programme; a deterioration of public sector administrative systems; and a growth in the formal and informal private sectors. The result has been that government's share of health expenditure has decreased; health facilities and health workers derive a rising proportion of their income from non-government sources (legal or illegal); and health facilities have considerable *de facto*, if not *de jure*, autonomy from administrative and political interference. Many health services are much less cost-effective and equitable than China's and Vietnam's. Policy-makers face similar options for remedying this situation.

5.1 Equity in health in an unequal society

The Chinese and Vietnamese regimes inherited very unequal health services in the 1940s. Neither country eliminated these inequalities totally, even when they implemented strongly egalitarian social policies during the 1960s and 1970s. Employees of state enterprises and the public sector had access to better equipped and staffed facilities, as did residents of the richer rural localities. These inequalities are increasing, and government has to balance the pressures by the better-off for sophisticated medical care against the need to ensure access to essential health services and prevent the emergence of structural inequalities so large that they could jeopardise a longer term expansion of cost-effective modern medical care.

5.1.1 Urban-rural differences China and Vietnam have compulsory health insurance, which covered 15% of China's population and 9% of Vietnam's in 1993. Health insurance protects the better-paid against the risk of high medical costs, but it can adversely affect access to health services by the rest of the population. China's experience (Vietnam's scheme is new) illustrates some issues that strategies for financing urban health services in low and middle income countries must address (Normand 1997).

A large share of the cost of China's work-related health insurance comes from public funds. Government pays for its employees' medical care, subsidises loss-making state enterprises which pay their employees' health care benefits, and gives grants to health facilities used primarily by insurance patients. This has contributed, directly and indirectly, to the financial squeeze on public finance for rural health facilities.

The cost of China's work-related health insurance has risen rapidly (Liu and Hsiao 1995). Users and providers of health services have benefited: users receive subsidised high technology medical care; and providers derive professional benefits from practising 'modern'

medicine and financial rewards from selling services. The increased cost is partially financed by the public through higher prices for commodities and government subsidies.

The greater availability of sophisticated health care has widened the gap between the services different social groups use. It has also encouraged people to resist the removal of subsidies to state enterprises, for fear they will lose their entitlement to health services if their employer goes bankrupt. Government supports the expansion of health insurance to deal with these problems. It is encouraging municipalities to extend coverage of work-related schemes to employees of non state-owned enterprises and to the self-employed. It is also encouraging them to subsidise health care for the poor. The aim is to ensure that most urban residents have access to at least basic health care.

This kind of reform would improve access to services for urban residents and protect them against the catastrophic financial impact of a serious illness. It would not diminish inequalities in access to care between urban and rural areas. Nor would it address the problems of the floating population, who work in the cities but are considered residents of their rural place of birth. It could formalise inequalities between urban and rural health services, if municipal governments resisted further transfers of revenue to poorer localities because they had to fund local services more generously.

Another concern regarding the rapid expansion of urban health services is that it encourages a costly style of care that depends on specialised health workers and sophisticated equipment. It creates incentives for health workers to remain in the cities where potential clients live and where well equipped facilities are situated. The quality of rural health services may suffer, if they cannot retain skilled personnel. Government needs to ensure that health insurance schemes take into account the interests of the uninsured by controlling costs. One strategy for achieving this is to represent the uninsured on scheme management boards (perhaps by the Ministry of Health). Other strategies are to regulate the kinds of services insurance schemes cover and/or remove tax exemptions from expenditure on luxury health services.

5.1.2 Allocation of government health budgets The pattern of public health expenditure does not reflect official priorities in China or Vietnam. Preventive services and grassroots health facilities receive a small share of government health expenditure; health services in rich localities receive larger government grants than in poor areas; and very little money is allocated for monitoring and regulation. Both governments need to formulate clear public health expenditure plans for allocating funds between rich and poor regions and between different kinds of facility. They have to decide whether to subsidise most services, or concentrate funding on a set of core activities. For example, government could guarantee a

minimum level of finance to basic health facilities in poor localities, even if this meant that other facilities had to generate their own revenue.

Both countries share with other transitional economies a tendency to devolve responsibility for service provision to lower levels of government, without giving them enough resources (Bird et al 1995). Each level of government spends most of its money on the facilities it controls and the workers it employs. Neither country provides much government funding to village-level health facilities, which do not have a corresponding level of government. Both countries need to reform their systems of public sector finance to improve funding of grassroots health services. This could be achieved by increasing fiscal transfers to poor local governments or by requiring higher levels of government to subsidise basic health services, as in Vietnam, where district governments pay the salaries of some employees of commune health centres.

Chinese townships and Vietnamese communes derive much of their revenue from user fees, profits from enterprises they own, and contributions by households and local businesses. Both countries are encouraging localities to establish health prepayment schemes. Bloom and Tang (1997) argue that the success of these schemes will be closely linked to the reform of the system for funding and managing local services. Schemes are easier to establish in rich regions where they can raise revenue from households and local enterprises; in areas with competent local administrations which can ensure that people will benefit from contributions they make; and in areas where some form of local accountability has been established. They are least likely to succeed in the poorest, least organised, areas which have the greatest need for better basic health services. The same considerations apply to rural health prepayment schemes in other countries.

5.1.3 Safety nets for the poor Prior to the economic reforms, collective bodies helped households who could not afford health care. The capacity of local administrations to finance medical relief was greatly diminished when household production was introduced. In China, local government and administrative bodies in the richer localities pay for some health services for the poor, however many poor townships provide no medical relief, at all. In Vietnam, communes provide financial support to poor households, according to Tipping and Truong (1997). However, Ensor and San (1996) found many health stations that did not offer any exemptions to the poor.

Governments need to establish mechanisms to ensure access to essential health services for the poor, as part of their efforts to reduce poverty. Medical relief funds could come from increased fiscal transfers to local governments or from national anti-poverty programmes. In either case, it will be necessary to target this support to the poor. This could be achieved by

subsidising health facilities or specific services used predominantly by the poor, or by establishing mechanisms for exempting people identified as poor from medical care charges.

5.2 Cost-effectiveness, efficiency and responsiveness to the needs of users

A complex health sector is emerging in China and Vietnam, in which the difference between public and private providers is blurred. Most health facilities derive revenue from government grants (although some Chinese facilities derive as little as 10% of their budget from this source) and payments by patients and insurance schemes. Government bureaucrats and politicians interfere much less than previously in the running of health facilities. Managers have a great deal of freedom to act in the interest of their health facility, particularly in China. One of their major aims is to increase their employees' incomes. Government cannot ensure that any additional funding it allocates will be used to improve services.

The blurring between public and private sectors extends to health workers. There are fully private providers who include trained health workers, former village health workers, and untrained drug sellers. These health workers work independently of the public sector, although China's rural doctors may receive small payments for preventive work. Both governments have passed laws to legalise private practice, but the behaviour of private practitioners is not closely monitored.

Most qualified health workers are government employees, however, they do not derive all their income from government. In China most health workers are full time employees of a health facility, which supplements their government salary out of surplus revenue.¹⁰ In Vietnam, health workers supplement their government salary by seeing patients privately, or earning money from non-medical activities.

One of the most difficult decisions government faces is whether to continue paying many health workers what amounts to a partial salary, or to pay fewer people full-time salaries. If it chooses the former option it needs to prevent health workers from spending too much time on revenue generating activities. If it chooses the latter option, it needs to determine the responsibilities of the smaller public health sector and it needs to establish mechanisms to ensure that the expanded private sector provides safe and effective services.

Previously, health service providers had few opportunities to put their interests ahead of their patients'. This has changed as administrative and political controls have diminished and health workers have diversified their sources of income. Competition between different kinds

¹⁰ Some facilities pay everyone the same bonus and others link pay to revenue generation for each clinical department (Tang 1997).

of health facility has diminished supervision and training and disrupted the referral system. Neither country is likely to re-establish the former model of health sector organisation. The alternative is to create new structures to influence the performance of health service providers. This will involve the creation of a rules-based regulatory framework, a strengthening of the government's agency role and the establishment of mechanisms to make health service providers more accountable to users.

5.2.1 Reform of the regulatory system The transition to a market economy can be constrained by a lack of clear rules concerning relationships between enterprises, financial institutions and government (World Bank 1996b). For example, China's enterprises do not necessarily have their accounts audited externally, and the same person may act as tax advisor to government and local enterprises. Local governments may force enterprises to pay them large management fees or employ more people than economically justified (Young 1995). There are also few rules to protect the public against dangerous practices. Government is slowly putting a regulatory framework in place and negotiating with local governments to enforce it (Lichtenstein 1993). The health sector reflects this reality.

Government has retained some regulations from the previous system. It sets low charges for consultations and inpatient days, and it assigns new graduates to facilities, whether they need them or not. This has led to rises in the cost of medical care, as facilities have sought additional sources of finance. Government needs to remove these distortionary regulations, but it cannot do so without finding alternative ways of reducing financial barriers to care and providing employment to trained personnel.

Vietnam and China are beginning to develop regulatory frameworks to protect the public against incompetent health workers, low quality drugs, and badly run health facilities. One of the most difficult decisions will be whether to allow only certain categories of health worker to prescribe drugs. The regulations must balance the need to ensure that essential drugs are widely available and that health workers have a secure source of income, against the desire to minimise inappropriate drug use. A successful health sector reform also requires systems of financial reporting, competent local administrations and other elements of a functioning market economy.

5.2.2 Redefinition of the agency role of government Ministries of health need to redefine their role as they devolve management responsibility to service units. Otherwise the public interest will not be taken adequately into account. For example, in China the interests of members of work-related insurance schemes strongly influence urban health services, and the interests of health workers exert a major influence on rural health services.

One reason why local governments have not actively protected the interests of health service users is that national governments have paid little attention to health. The national level assesses local government leaders in terms of their success in stimulating economic growth and controlling public spending. Heads of health departments are under pressure to prevent rises in government grants to health facilities and, if possible, to meet the aspirations of health sector employees. They have been under less pressure to improve the quality of health services and control their cost. This could change if national governments take health more seriously.

A second reason is the way government personnel are paid. The people responsible for implementing regulations in China are mostly employed by health facilities or preventive institutes. Their income is linked to their employer's success in generating revenue. This creates conflicts of interest, for example, when township health centres are meant to supervise the quality of the village health workers with whom they are competing for patients. Tang (1997) has shown that health facilities are more likely to implement regulations which provide a financial return. For example, county anti-epidemic stations energetically enforce the law requiring food handlers to pass an annual medical examination, since the fees for these examinations are an important source of revenue. They are less eager to enforce other regulations. In Vietnam preventive institutes are fully funded by government. However, the levels of pay are low and many people supplement their income with extra-hours work. Little is known about how this affects their performance.

Many local governments in China sign contracts with health facilities which specify the services they should provide. But they only monitor the financial provisions of these contracts. This is partly due to the factors outlined above, but it also reflects a lack of skill in negotiating with health facilities and monitoring their performance. Local governments need to establish and train a core group to purchase health services on behalf of the population. This group has to have a secure position, independent of health institutions, and it has to be adequately paid. Members of this group could be employees of strengthened government health departments, or they could work for independent local health service boards.

Governments' ability to influence health service providers tends to diminish as it finances a decreasing share of health facility budgets. Government could increase its influence if funders of health services (government, work-related insurance, rural health prepayment schemes, and so forth) co-operated to negotiate joint contracts with health facilities. One strategy for achieving this would be to establish local health boards on which all major stake holders would be represented.

5.2.3 Making service providers more accountable to the community Prior to the 1980s, Communist Party cadres monitored the performance of health facilities and punished opportunistic behaviour. This put pressure on local health services to achieve public health targets. These cadres play this role much less and the balance of pressures on health facility managers has altered in favour of the employees. Government needs to give users of rural health services more influence. This may involve including representatives of the population on decision-making bodies at village, township and county levels.

The need to make local services more accountable is not limited to health. The Chinese government has recently passed laws to establish village administrations (O'Brian 1994). The aim is to make these bodies accountable to the local population. It is not yet clear how representatives will be selected and the degree to which they will influence resource use. However, if the present trend towards a decrease in monitoring and regulation of local services by higher levels of government continues, local representative bodies will have to play an increasing role to protect the interest of the population.

5.3 Conclusions

The health sectors of China, Vietnam and other low and middle income countries will become increasingly expensive and inequitable if the trends described above continue. This could slow, or even reverse, the decreases in preventable illness and premature death and it could contribute to an increase in health-related poverty. It could also jeopardise the long-term development of cost-effective health services. Governments have to play a leadership role to prevent this from happening.

In order to achieve this they have to clarify their objectives for health sector reform. These objectives may be contradictory; for example, government may wish both to ensure the poor access to essential health services and to enable those in formal sector employment to obtain more sophisticated medical care. However, an uncontrolled expansion of urban health services could adversely affect the performance of the rural services. Where the achievement of one objective can jeopardise the achievement of another one, it is important to identify the trade-offs that policy-makers have to take into account.

Governments must recognise that the health sector is complex, and simplistic interventions may have unintended effects. For example, attempts by the Chinese government to ensure access to services by fixing low charges for consultations contributed to increases in the cost of care. This underlines the need to base reform strategies on a good understanding of the functioning of the health sector in its administrative and economic context. Reform options should be assessed in terms of their likely impact on the achievement of policy objectives. Particular attention should be paid to the influences on provider behaviour such as financial

incentives, government supervision and regulation and mechanisms to make providers accountable to users.

The development of equitable and efficient health services is a political, as well as a technical, task. Even if consensus is reached on a reform and development strategy, the health sector will remain a contested arena. Groups of users and providers of health services will continue to attempt to gain advantages. Structures are required to enable the weaker and less visible groups (such as residents of poor rural areas and health workers who predominantly serve this population) to influence decision-making. As Tipping and Truong (1997) argue in the case of Vietnam, one of the most important determinants of the kind of health sector that emerges during the transition to a market economy (or the implementation of a structural adjustment programme) will be government's commitment to the creation of a service that meets priority needs and its capacity to use its power strategically in support of this commitment.

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