

CHINA: HEALTH, POVERTY AND ECONOMIC DEVELOPMENT

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1. INTRODUCTION

The *Report of the Commission on Macroeconomics and Health* (CMH, 2001) established by the WHO provided evidence of the links between health and economic development and emphasized that the poorest populations are disproportionately affected by preventable and curable diseases and bear the brunt of the financial burden of illness.

The Commission recommended a massive scale up of health investments, and outlined a health investment strategy as part of a comprehensive economic development plan. The CMH also endorsed the oversight and coordination of these policy-analysis and planning activities through National Commissions on Macroeconomics and Health, multi-stakeholder mechanisms to be jointly headed by the Minister of Finance and Minister of Health.

The follow-up work on macroeconomics and health was not undertaken solely to provide guidance and support decision-making on specific technical issues, since the national context can be variable. Rather, the aim is to strengthen capacity in countries and facilitate the decision-making process by providing evidence-based support and enhanced coordination among health and development actors.

The macroeconomics and health work in China has focused on understanding the linkages between health, economic growth and poverty. Similar to other countries, this work has been carried out in three basic phases. Phase 1 covered initial national familiarization with the CMH report and analysis of its relevance and applicability to China. During this phase, China considered establishing an inter-ministerial mechanism focusing on increasing and improving health investments for poverty reduction and economic development, in particular through more effective advocacy and collection of evidence. During Phase 2, activities on macroeconomics and health supported the development of a long-term health investment plan based on situational and costing assessments. Sustaining cross-sectoral commitment and defining an implementation strategy for the plan have been part of this phase. Phase 3 covers implementation, monitoring and evaluation of the activities defined in the investment plan. WHO facilitates country access to technical and financial support at all levels and has played a role in bringing a wide range of stakeholders together around the macroeconomics and health process.

Over the past generation, since launching market-oriented reforms in 1978, China has made impressive gains in overall development. Growth performance – with real annual GDP growth rates averaging at 9.4% during 1979-2004 – has been correlated with reductions in poverty¹ and with social development. An estimated 400 million people have been lifted out of poverty within the past 30 years, mainly benefiting from liberalization of agriculture and rural industries. During the same time period, the educational standards improved: average years of schooling in the 15-64 year age group rose from 5 to 9 years, and the shares for those with junior secondary schooling increased from 15 to 38 percent. Progress was also achieved in health, with China surpassing other lower middle-income country standards.

But the forces unleashed by reforms – namely economic liberalization with few provisions toward equity – have negatively affected the distribution of incomes and opportunities. Since the late 1990s, widening disparities in income and social development have started to overshadow the impressive performance in economic growth and poverty reduction. Liberalization and an unclear role of the Government in the social sector have contributed to significant income inequalities, and inequity in access to public services. Disparities in human development indicators have sharpened over the past few decades and China's progress in social development has slowed down, particularly in poor rural areas.

The relationship between health and future growth performance will become more dramatic in the near future as China begins to rely more on productivity improvements and private consumption to sustain growth. Productivity improvements such as technology-led growth require social investment in order to provide an educated and healthy workforce. Private consumption is dependent on household perceptions of security. Making people willing to save less as a precaution against the financial risk of illness, in turn, requires improving social security and reducing household dependence on out-of-pocket spending for medical costs.

¹ Unless specified otherwise, this report uses the international definition of poverty as consumption level of less than USD \$1 per day.

Health, Poverty and Economic Development in China summarizes the health issues confronting China, and the strategies outlined by the Chinese Government to deal with these challenges in the context of China's economic development. Particular attention is paid to balancing the existing inequities in health outcomes and improving access to health care as a necessary basis for sustaining rapid economic growth and poverty reduction in China in the future. This analysis builds extensively on earlier studies prepared under the WHO macroeconomics and health program in China and on China Health Situation Assessment published by the United Nations Health Partners Group.²

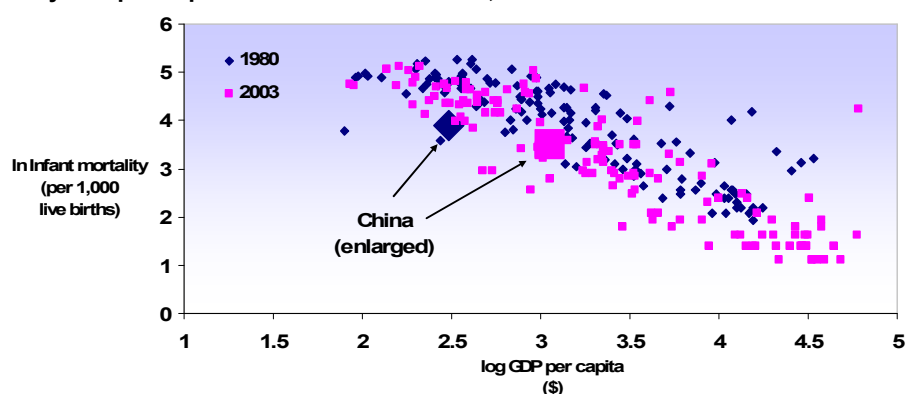
² World Health Organization. Health Situation Assessment of the Peoples Republic of China (2005).

2. HEALTH OUTCOMES AND CHALLENGES

China's economic success since launching market-oriented reforms in 1979 is due in part to the relatively good level of human capital available at that time. In this context, health, essential for the capacity to learn and be productive at work, has played a pivotal role in China's economic development.

China's indicators at the end of 1970s compared extremely well with those of countries at a similar per capita income level. Figure 2.1 illustrates this fact by comparing countries according to their infant mortality rate as a function of income per capita, over time.

Figure 2.1 China entered the post-1979 market-reform period with health indicators much better than those expected at its income per capita ... but has become relatively less outstanding by the early 2000s: Infant mortality and per capita GDP across countries, 1980 and 2003



The relative strength of health outcomes in China by the end of 1970s followed the preceding 30 years of introducing nearly universal access to preventive and other essential health services. Health service delivery costs were almost fully covered by funding from the central Government coffers. China's achievement in improving health was recognized internationally as a "successful health revolution" and was emulated in many developing countries seeking to provide "health for all."

The post-1979 reform period, while catapulting the economy into a sustained period of high growth, showed less impressive results in terms of health outcomes. Figure 2.1 depicts the trend of relatively slower human development by showing China moving closer to the average levels of infant mortality expected in countries at a given income per capita.

While the wealthier share of the Chinese population has benefited from advanced health technologies, the poor have lost access to even the most essential services.

This section of the report explores the trends in China's health outcomes in the context of ongoing socio-economic transition. Specifically, it highlights the recent trends in health outcomes while exploring the disease burden and health risks facing China. The demographic trends that are likely to exacerbate some of the evolving health challenges are discussed.

2.1 Health outcomes

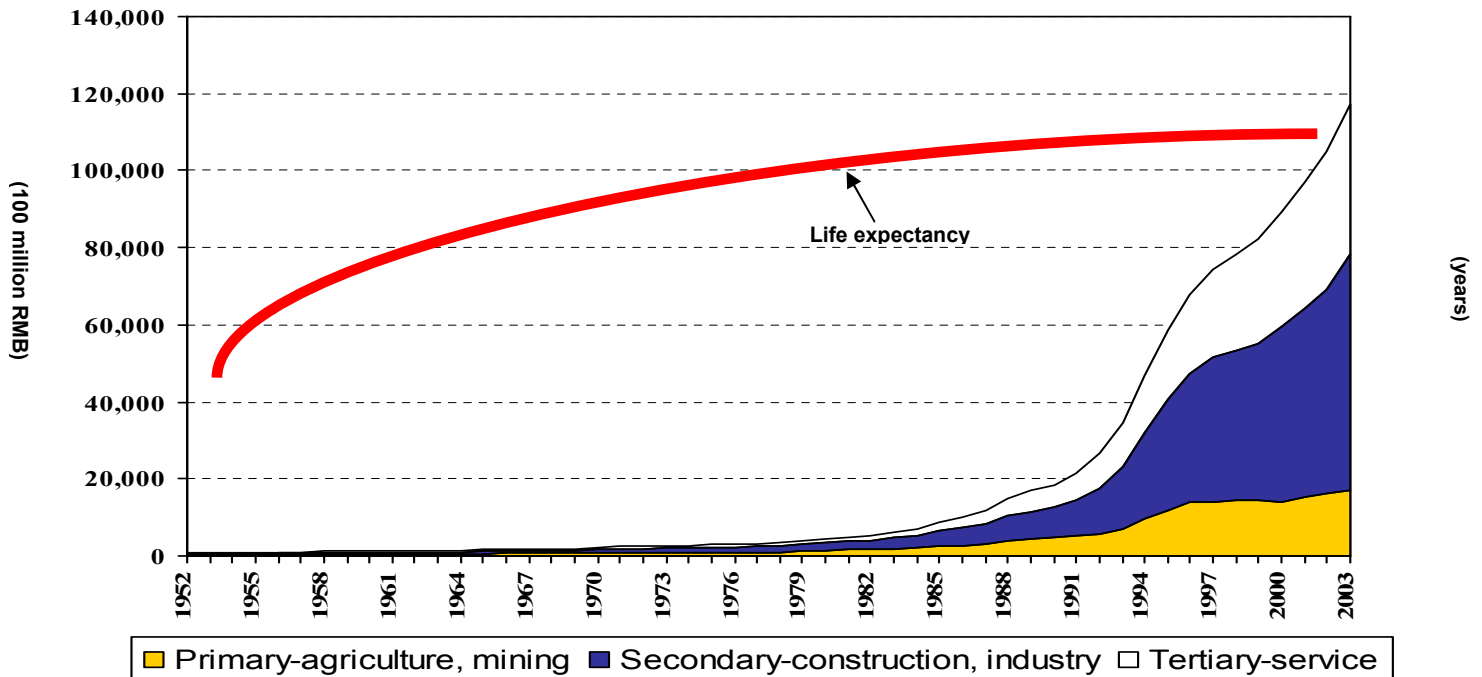
2.1.1 Continuing progress

Health outcomes continued to improve during 1979-2003, although perhaps at a slower pace than in the preceding quarter of a century. Figure 2.2 shows this trend over almost 50 years in comparison to fiscal growth. Other health indicators improved as well. By 2004, maternal, infant and under-5 mortality rates declined to 0.05%, 1.8%, and 2.0%, respectively, levels comparable with middle-income countries.³ Immunization of one-year-olds against tuberculosis and measles reached 98%. Undernourishment rates among children under five years of age declined to less than 10%.

³ China National Maternal and Child Surveillance and WHO, UNICEF, and UNFPA Joint Review of Maternal and Child Survival Strategies in China (2005).

Though the absolute change is dramatic, improvement in some health outcomes during 1979-2003 are less when compared to other countries. Life expectancy improved at a slower rate than in medium- and high-income countries – by four years, from 67 to 71 years – during comparable time period.⁴ Figure 2.2 illustrates the slowing pace of improvements in life expectancy in contrast to the strong economic performance and structural changes over the past half a century.

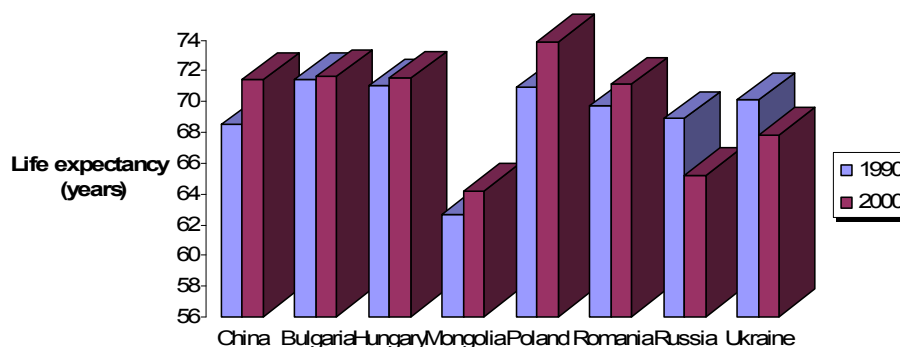
Figure 2.2 The slowing pace of health improvement comes in contrast to strong economic growth and successful structural changes: Life expectancy and GDP, 1952-2003.



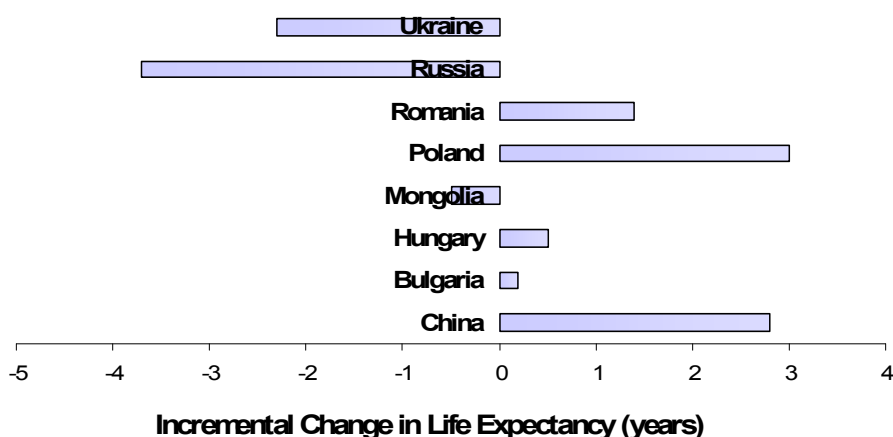
Source: China Statistical Yearbook 2004 and UNIDO analysis

International experience suggests that economic transition may have a transiently negative impact on health. In this context, compared to other countries with transition economies, China has addressed these challenges relatively well. Figure 2.3 compares China's progress in life expectancy with selected transition economies.

Figure 2.3 China's health improvement may be considered more significant in the context of the challenges of transition: Life expectancy in selected transitional economies, 1990 and 2000.



⁴ Wang, S. "The crisis and opportunities in China's public health." Comparative Studies, 2003(7),



The improvements in health demonstrated by the above figure, though promising, have been less than expected by the Chinese Government. Targets set by the Government in 1991 were only partly met by 2000. International experience suggests that China is not alone in this circumstance primarily because setting appropriate targets can be difficult, making the monitoring of results even more challenging.

Box 2.1 Health improvement: the targets and results

A key factor of China's reform process has been the use of indicators to measure development. Different groups have used unique sets of indicators to this end. In 1991, researchers from the *State Statistics Bureau and departments of planning, finance, health and education* defined 16 indicators to measure the progress toward the xiaokang society. Indicators related to health included the following: average life expectancy, infant mortality rate, rural primary health care facilities, and per capita daily protein intake. By 2000, three of the 16 indicators failed to meet the xiaokang standards: 15% of rural households fell short of meeting minimum per capita income goals, 10% of population did not meet the targeted daily protein intake, and 20% of counties failed to establish rural primary health care systems.

The *Chinese Academy of Social Sciences* has used a system of 28 targets. Of the 28 targets, three relate to health: the number of doctors per 10,000 population, average life expectancy, and proportion of people drinking tap water among the rural population. The Academy reconns that by 2001 China fell short against these three targets by 18%, 4% and 35%, respectively.

More recently, the *Sustainable Development Strategy Study Group of the Chinese Academy of Sciences* has brought forward 40 indicators to measure progress. Only two relate to health: the number of doctors per 1,000 population and average life expectancy.

Finally, the *Development and Research Center (DRC) of the State Council* developed a new system of indicators to measure China's progress toward the objectives of xiaokang and harmonious society. The system includes 16 outcome-oriented indicators. Two of these relate health: average life expectancy at birth and the proportion of people drinking safe water.

Sources: Project Group of Chinese Xiaokang Society on Research of Index System of Building Overall Xiaokang Society, the Chinese Academy of Social Sciences, *Social Science Literature Press*, 2003; Sustainable Development Strategic Research Group of the Chinese Academy of Sciences: *"China Sustainable Development Strategic Report 2004"*, China Science Press, 2004; Li Shantong, Hou Yongzhi, Sun Zhiyan and Feng Jie: *Index System of Building Overall Xiaokang Society*, Research Report of Development Research Center of State Council, No. 20, 2004.

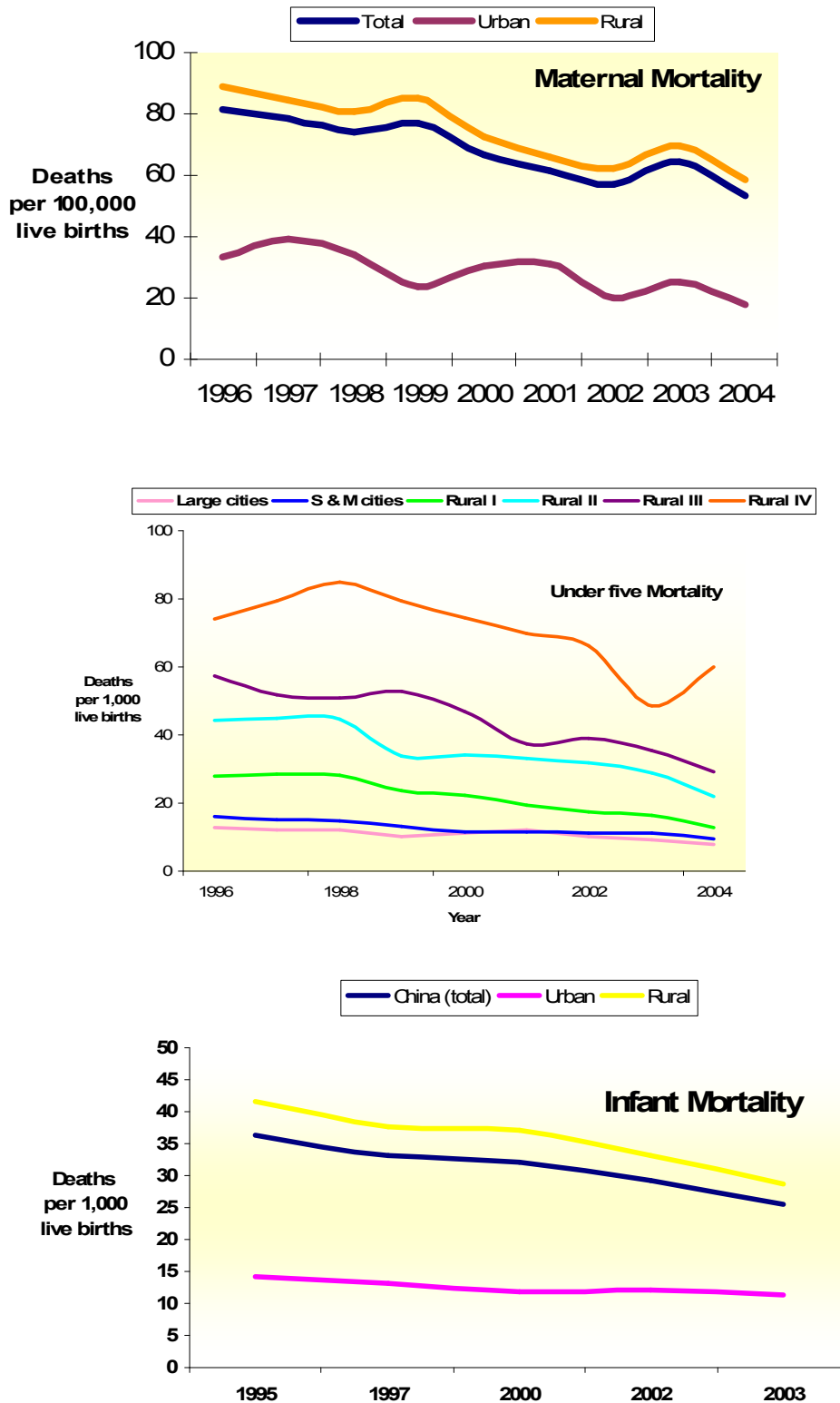
2.1.2 Disparities

A critical health challenge in China relates to inequality in health outcomes, worsening since the 1980s. This has been confirmed by a recent comprehensive review by the Institute for Health Economics of Ministry of Health which evaluated disparities in health indicators, access to health services, and health financing in China.⁵ The study pointed out that while infant and childhood mortality rates in developed coastal areas mirror those of industrialized countries, rates in most

⁵ The report – Differences in Health and Inequality in Public Health Conditions – by the Institute for Health Economics has not been published.

western provinces are 3-5 times higher. Figure 2.4 illustrates the persistent rural-urban disparities in maternal mortality, under-5 mortality and infant mortality rates.

Figure 2.4 Rural-urban disparities persist:



In terms of rural-urban disparity across provinces, China National Maternal and Child Surveillance reports the 2004 rates for maternal, infant and under-5 mortality in rural areas were three times greater than those in urban areas (0.06% versus 0.02%; 3.7% versus 1.2%; and 4.6% versus 1.4%, respectively). In addition to maternal and child health indices, Figure 2.5 suggests that life expectancy is also generally lower in provinces with higher share of China's rural population. Provinces with the lowest share of China's rural population fare significantly better than those with more rural residents. Figure 2.6 further supports this finding by showing the contrast in life expectancy between the richest 7 and poorest 7 provinces.

Figure 2.5 Life expectancy differs across provinces by share of rural population: Provincial life expectancy and percentage of rural population, 2003

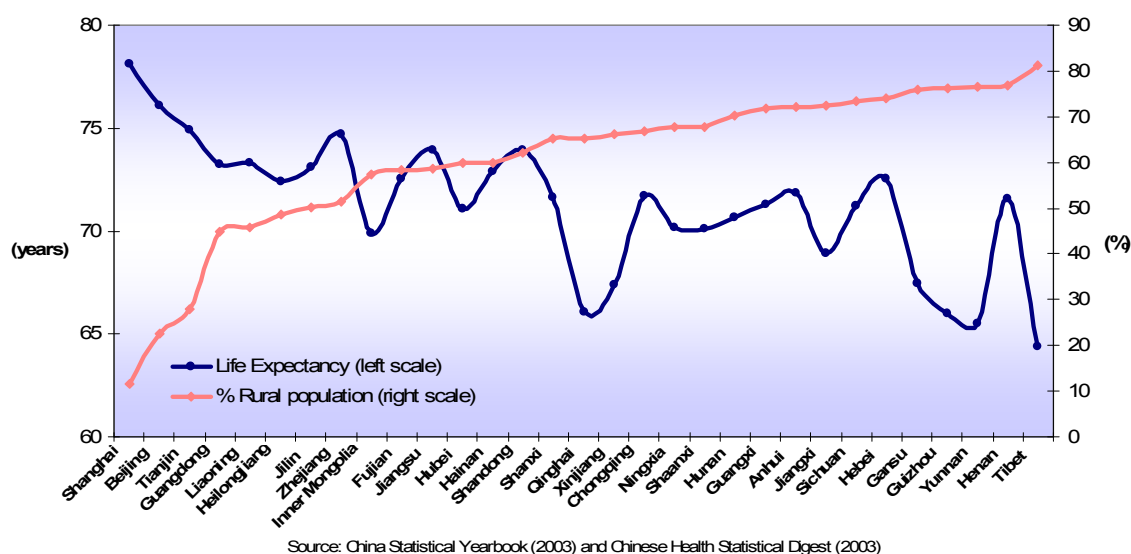
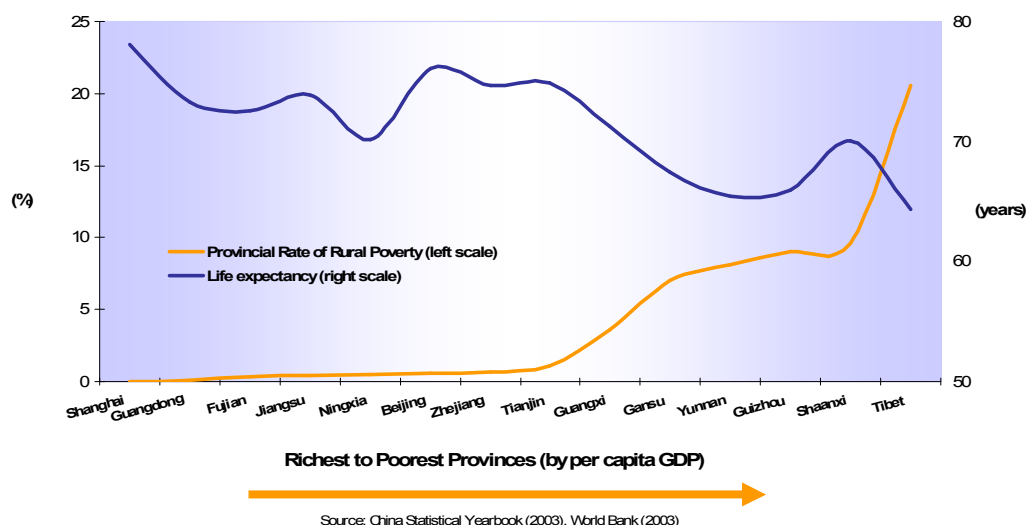


Figure 2.6 Gap in health outcomes between the richest seven provinces and poorest seven provinces is wide: Life expectancy and provincial rate of rural poverty, 2003



These disparities extend beyond life expectancy rates. Measures of China's human development have shown inequality on many levels (see Box 2.2). While some of these categories have shown improvement, many areas of human development, notably basic education, have continued to regress.

Box 2.2 Selected indicators to illustrate disparities in China's human development

Regional disparities: While all 33 provinces are now in the UN's medium human development category, Shanghai's HDI is almost 55% higher than Tibet's. Nationally, HDIs are steadily rising, but in some central and western provinces such as Tibet and Yunnan, human development achievements are deteriorating. The maternal mortality rate is 9.6 in Shanghai, 111 in Guizhou, and 399 in Tibet. Rates of vaccine-preventable diseases, such as measles, are 5-6 times higher in western provinces compared to eastern provinces, reflecting uneven immunization coverage.

Rural-urban disparities: Schooling is on average 2-3 years shorter in rural areas compared to urban areas. About 20 per cent of the rural population still drinks unclean water and the rate is over 50 per cent in the poorest – class IV – rural areas, compared to nearly zero in urban areas. The prevalence of malnutrition in rural areas is two to three times higher than in urban areas. Over 60 per cent of rural residents report no access to information on health. Job creation in rural areas has been stagnant and even declining in the secondary sector.

Disparities between migrant and resident populations: Migrant families tend to be excluded from employment opportunities and social services. Two thirds of maternal deaths in urban areas appear related to migrant women who account for only 10% of total pregnancies.

Gender disparities: The sex ratio at birth has reached an imbalance of 117 males per 100 females. Girls suffer from lower access to health, which expands the gender gap in infant and under-5 child mortality. Women tend to be the first and the majority of those laid off.

Source: Policy notes prepared by WHO in cooperation with other UN agencies and Health Partners for China's 11th Five-Year Plan.

Differences in health outcomes, however, are not an unavoidable result of the transition from planned to market-based economy even in a country as populous and complex as China. Major improvements in health outcomes could be achieved with relatively modest increases in public spending. For instance, over 75% of maternal deaths and 70% of mortality among children under 5 years are preventable with better access to basic inexpensive health care and health information. In some cases, these deaths are preventable with a single intervention.

2.2 Health problems

The evolving burden of disease in China has long-term implications for economic development.⁶ Productivity of the workforce provides an example: absence from work due to illness and the rates of temporary and permanent disability have been relatively high in China. There are approximately 60 million known disabled people (bringing the disability rate to 5% of the total population) out of which 12 million suffer from mental retardation. Among newborns, the rate of physical deformity stands at 6% compared to less than 1% in developed countries. In addition, a significant share of China's population suffers from preventable conditions, including infections (10% of the population suffers from active hepatitis B) and illnesses caused by hazardous living and working conditions.

2.2.1 Leading causes of disease

Like many other transition economies, China faces a double-burden of illness.⁷ Preventable communicable diseases which are common in low-income countries remain a significant cause of death, particularly among young children. A rising majority of China's population suffers (and dies) from vascular-related disease.⁸ In addition to this, driven by socio-economic and demographic transitions, chronic noncommunicable diseases which are common in high-income countries have become increasingly prevalent. Emerging infections such as SARS and avian influenza, however, can still have catastrophic effects on China's health and economy.

⁶ Zhang Weiqing, Nine Contradictory Problems Facing China's Population and Family Planning, Qiushi, Issue 8, 2004.

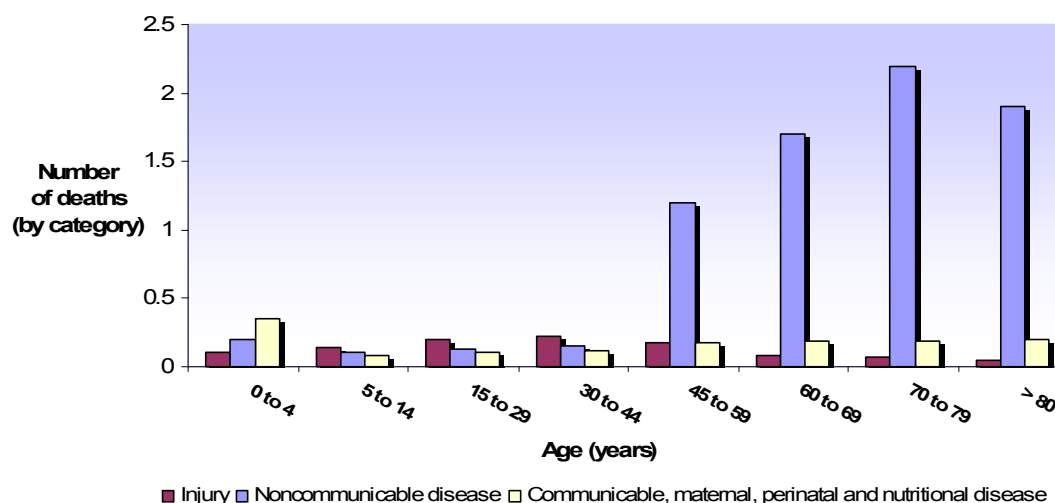
⁷ This section is based on China Health Situation Assessment, prepared and published by the United Nations Theme Group for Health in Beijing 2005.

⁸ He J, et al. Major causes of death among men and women in China. New England Journal of Medicine. 2005 Sep 15;353(11):1124-34.

Global Burden of Disease estimates produced by World Health Organization (WHO) indicate that China's overall disease profile now resembles that of a developed country, with more than 90% of deaths due to non-communicable diseases and injuries. Cerebrovascular disease, chronic obstructive pulmonary disease, and heart disease account for nearly 40% of all deaths. The rankings based on disability-adjusted life years (DALY)⁹ also highlight the emergence of noncommunicable diseases and injuries as the predominant health condition.

Among the remaining infectious diseases, hepatitis B virus infection, TB and lower respiratory infections still account for significant mortality and lost DALYs. Figure 2.7 shows the cause of death by age in China in 2003. As illustrated above, the national averages, however, hide wide differences across socio-economic groups and genders as well as across localities.

Figure 2.7 Preventable communicable diseases continue to take toll on young children while noncommunicable diseases are increasingly prevalent in adulthood: Cause of death by age, 2003.



Source: WHO World Health Report (2005)

2.2.2 Health risks

Economic and social development has been associated with a changing profile in the health risks facing China's population.¹⁰ In addition to the health risks associated with poverty and underdevelopment, urbanization and industrialization present new challenges particularly.

The major health threats in the underdeveloped areas of rural China include under-nutrition, vitamin and mineral deficiencies, unsafe water, lack of sanitation, and indoor pollution. Significant progress has occurred in these areas, but the health situation has much room for improvement. The current rates of moderate stunting, for instance, reach 40% in China's Western provinces. Similarly, among women of childbearing age, the prevalence rate of anemia is about 40% in rural areas. Further, as much as 80% of rural households have no access to a sanitary lavatory, and 20% of rural households depend on water that is unsafe to drink.

Emerging health threats related to the environment and workplace are becoming more evident in China. Air pollution and water contamination by industrial and municipal waste as well as overuse of

⁹ DALY is a statistical formulation widely used to put a specific number on the combined loss of health and loss of years of life due to disability from disease or injury

¹⁰ See Annex 1 for a summary of disease burden and health risks in China.

chemical fertilizers and pesticides cost the economy in excess of 9% of GDP.¹¹ In terms of workplace risks, another major source of morbidity and mortality in China, the occupational accident rate in 2003 was estimated at 1.3 per 1000 of workforce with 15.4 fatalities per 100,000 in workforce (85% of which are occurring in coal mining)¹² - compared to the risk of fatality at 8.3 per 100,000 of workforce worldwide.¹³

2.2.3 Demographic trends

Ongoing and unique demographic transitions contribute to China's health challenges. Citizens are living longer and mortality rates have continued to fall. A baby born in China in the early 1950s could expect to live 40 years; one born today can expect to live for over 70 years.¹⁴ At the same time, population fertility rates have decreased rapidly. In 1980, the per capita fertility rate was 2.4 but by 2003 that number had fallen to 1.8.¹⁵

While the strict population control policy has provided some benefit, new socio-economic and health challenges have arisen as a result – namely from the rapidly rising share of elderly and gender imbalances.

Gender imbalances have become worrisome driven by the cultural preference of many Chinese families for a male son and exacerbated by the existing weaknesses in social security system. The dependence on sons to take care of elderly parents also plays a role in this inclination. Census data shows that the ratio of newborn boys to girls increased from 108.5:100 in the 1980s to 117:100 in 2000. This significantly exceeds the international newborn male to female ratio, which is generally between 103:100 and 105:100.¹⁶ The economic and social impact of such gender imbalances is being analyzed, and experts agree that the impact is likely to be negative in terms of the occurrence of violence, trafficking, commercial sex and sexually transmitted diseases.

With improved living standards and a longer life expectancy, China is also experiencing a rise in the number of elderly. Box 2.3 summarizes some of the qualities of the aging population in China.

Box 2.3 Characteristics of the aging population in China

- *“Aging but not rich”* Internationally, countries entering the list of aging societies have per capita GDP of about US\$10,000 on average, compared to China's US\$1,000.
- *The share of the “very old” rises* In recent years, the share of those aged 80 years and above has increased at a rate of 5.4% annually, 2.2 percentage points more than the share of all those aged 60 and above.
- *Rural old* The majority of elderly will continue to live in rural areas, suffering from the disadvantaged access to health, social security and other public services in rural areas.

The National Working Committee for the Aged, Undertaking Development Situation for the Aged in China, 2002.
http://www.cnca.org.cn/include/content5.asp?thing_id=10468

By 2035, 25% of China's population will be aged 60 or older – compared to 10% in 2001. With aging, the share of working-age individuals who contribute to Government revenues and economic growth will decline and the demand for social services will rise. Without a strong commitment to prevention, chronic and noncommunicable diseases of the old may generate a drain on the health system and society.

¹¹ Guang X. 1997. An estimate of the economic consequences of environmental pollution in China. In Smil and Yushi, Project on Environmental Scarcities, State Capacity and Civil Violence. Cambridge: Committee on International Security Studies.

¹² China Occupational Safety and Health profile

¹³ WHO. Situation analysis for health at work and development of the global working life.

¹⁴ UN Population Prospects, 2002 Edition

¹⁵ State Family Planning Commission

¹⁶ The newborn boys-to-girls ratio in China is particularly high for the second child born into a family – 151.9:100 compared to the ratio of 107.1:100 for the first child in 2000. Moreover, girls seem to suffer from high mortality rates compared to boys – bringing the boys-to-girls ratio among the 1 to 4 year old to 120:100 nationally, and up to 130:100 in some provinces, including Hainan, Hunan and Jiangxi.

3. HEALTH SERVICES: ACCESS, DELIVERY AND FINANCING

Health outcomes and the burden of disease improve only when the health system provides access and continuity of care. In order to meet these demands, there must be efficient financing and coordinated function of the health care system. Disparities in the allocation of public resources for health, including regulation and enforcement, only serve to exacerbate the existing income inequalities and undermine the continuing progress in poverty alleviation in China. This section examines these relationships and provides some background into the current demographic situation.

3.1 Access to health services by the poor

Many social, financial and cultural obstacles impede the poor in trying to access health services in China. According to the 2003 National Health Services Survey, half of those surveyed refused outpatient services when sick, and 30% of those who were referred to hospitals refused inpatient care.¹⁷ Outpatient non-use also increased substantially from 36% to 49% of patients in 1993 and 2003, respectively.

3.1.1 Financial barriers

Among the many obstacles in access to health services facing the poor, the financial barriers are perhaps the most acute. Despite large-scale infrastructural investments by the Government to facilitate access, evidence indicates that many people reduced the use of medical services for purely financial reasons. Nationwide, health services surveys indicate that 38% of those who did not seek medical attention while sick and 70% of those who refused hospitalization after doctor's referral reported excessive cost as the primary factor for those decisions.¹⁸ Furthermore, the gap in non-hospitalization rates between the bottom and the top quintile groups widened during 1993-2003 from 15 to 24 percentage points in urban areas and from 19 to 22 percentage points in rural areas.¹⁹ Among early hospital discharges that occurred against medical advice, 67% were reported as associated with financial non-affordability.

The financial obstacles to health services in China are largely related to two factors. First, the cost and price of health services are rising at an alarming rate. This is largely driven, as discussed below, by weakness in governance relating to lax regulatory and enforcement systems. Second, the majority of China's population fully depends on out-of-pocket spending to cover the cost of health services. Out-of-pocket spending accounted for 60% of total health spending in 2004. In rural areas, the share of out-of-pocket as a portion of total spending was as high as 90% prompting rural households to amass savings.

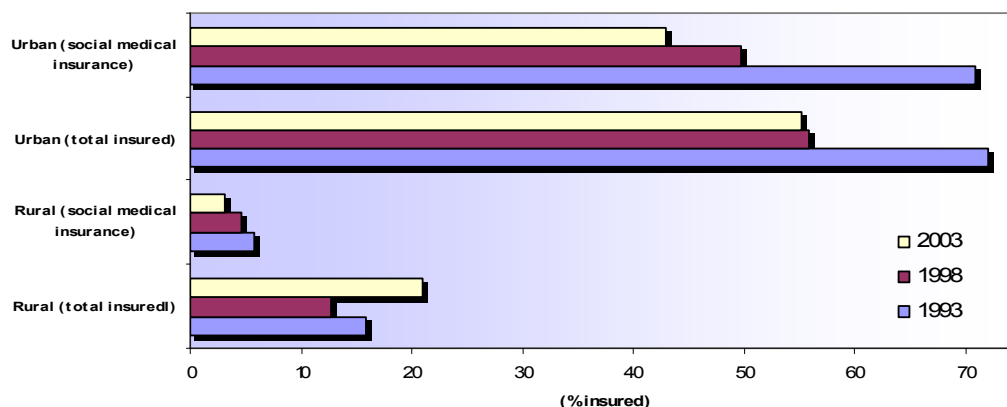
The problem generated by dependence on out-of-pocket spending largely relates to the weaknesses in health financing. The inequitable contribution of Government budget to the delivery of basic health services and low coverage by the available health insurance schemes further hamper access to care. By 2003, some 80% of the rural population and nearly one half of the urban population were not covered by any health insurance schemes (Figure 3.1). Survey data also shows that during 1993-2003, coverage of social health insurance declined, especially for the poor, with the coverage rate for the bottom quintile income group dropping from 37% to 12%.

¹⁷ Please refer to Annex, table 2 for additional information.

¹⁸ National Health Services Survey (2003)

¹⁹ Ministry of Health. An Analysis Report of National Health Service Survey in 2003, Tables 3-8-9 and 3-8-6. (2004)

Figure 3.1 New medical insurance schemes only slowly fill the enormous gap: Insurance coverage rates for urban and rural residents, 1993, 1998 and 2003



Box 3.1 The New Rural Cooperative Medical Scheme

The long-awaited New RCMS was the result of a joint directive of CCPC and the State Council in 2002, aimed at the development of a rural health system. Within two years, 310 counties had already established New RCMS pilot programs. These programs involve about 73% of the total population in the requisite counties and affects close to 69 million people. Early reports estimate that under this assistance resulted in a reimbursement rate of about 37% of total medical costs. Unfortunately, the great majority of the rural population remains uninsured and unable to cover medical costs.

The New RCMS is designed to relieve the excessive financial burden of health care on rural residents, and it provides funding for catastrophic illness and in-patient medical services. Participation is voluntary and the cost is designed to be affordable for poor rural residents. Those unable to afford the fee are eligible for assistance through the MoCA Medical Financial Help Scheme. County, prefecture and provincial Governments contribute to the local New RCMSs based on the number of participants. In central and western regions, the central Government contributes as well.

By 2010, the New RCMS is expected to cover most of the country's rural households, but there are concerns about the ability of the current design to scale up for full coverage of the larger population. Much like medical schemes available to urban Government employees, the New RCMS suffers from the dangers associated with limited risk-pooling, unpredictable fund management, and lacking equalization mechanism across localities. Further, the New RCMS has met with resistance, primarily by those it was designed to assist. Individuals often discount the value of participation, since catastrophic illness and the need for in-patient medical services are rare and few consider themselves to be in high-risk categories. Floating population groups question the utility of a program that is not portable, since health services are limited to a specific locality. Finally, allowing individuals to opt-in or opt-out erodes the financial sustainability of the scheme.

In rural areas, the New Rural Cooperative Medical Scheme (RCMS) accounts for large share of the insurance coverage rates (Box 3.1). The scheme, however, does not work well for the poor, since its scope is limited to catastrophic illness (and excludes basic health services), it requires full up-front payment of medical bills, and offers reimbursement rates as low as 20-30% of medical bills. These factors play a role in the underutilization of this resource,²⁰ and the continued low coverage rates for the rural poor.

Recent policy initiatives to establish medical financial assistance (MFA) to address the health needs of the poor in both urban and rural areas have been encouraging and may help to fill some of the remaining gaps, provided that they are based on a sustainable and equitable financing mechanism. Box 3.2 illustrates the current status of MFA implementation.

²⁰ Liu Y. Development of the rural health insurance system in China. *Health Policy and Planning*. 2004 May;19(3):159-65.

Box 3.2 Medical Financial Assistance (MFA)

Medical Financial Assistance (MFA) was established in 2000 as a Government initiative to address some health needs of the poor in both urban and rural areas. MFA is managed by the civil affairs authorities of municipal Governments and varies greatly across cities, depending largely on the fiscal capacity of local Governments.

Richer municipalities such as Beijing, Guangdong, Shanghai, and Xiamen, are able to offer MFA to families living below the official poverty line. In these areas, special MFA funds reduce fees and provide partial reimbursement of out-of-pocket payment for catastrophic disease episodes. Major sources of funding for urban MFA programs are municipal Government budgets, surpluses of the urban health insurance programs, proceeds from social welfare lotteries and charitable donations.

In rural townships, the MFA system is less developed. In 1998, the Chinese Government, World Bank and DFID piloted MFA schemes in 71 counties in 7 central and western provinces. Using the information gained from these pilot studies, the Ministry of Civil Affairs has been developing regulations to implement MFA and coordinate MFA with RCMS. In rural townships, MFA is to be supported by financial contribution from central Government budget as well as local Government budgets, lotteries and donations.

3.1.2 Geographic obstacles

Almost 10% of rural residents have to travel more than 30 minutes to receive medical care, compared to only 1% of their urban counterparts.²¹ Specialized care (such as emergency obstetric care and trauma services) is not available outside cities because adequate facilities and trained medical professionals are scarce. Though improving, the availability of qualified health care providers tends to be low in rural areas, while excessive by some accounts in urban areas as discussed below.²²

3.1.3 Exclusion

Many specific groups suffering from limited access to health have been under-represented in surveys, studies and policy considerations. Beyond simply being under or just above the poverty line, they have unique qualities that often place them at a comparative disadvantage. Some examples of these groups include the elderly, women, children, the disabled, the floating population, and those living with HIV/AIDS. Little is known about the specific challenges facing these groups in terms of health needs and access to health services. Interest has been generated about these groups, but the gaps remain enormous.

For instance, the 120 million “floating” population of rural migrants working outside their area of official residence are perhaps not the poorest citizens in their home villages but they are excluded from public resources (and government policy planning considerations) in the places they work. From the perspective of local Governments and service providers, migrants present unique epidemiologic (often health-related) challenges that are not addressed by current public health strategies. Although the situation has been improving in the past few years, migrants continue to be at a disadvantage in accessing public services and participating in social insurance schemes. The reason is that many of the schemes are managed locally and do not have portable benefits. Only recently²³ this group has come to the attention of local policymakers and service providers.

3.2 Health care financing and delivery

The system of financing and delivery of health services, particularly the large extent of decentralization and inequitable allocation of public resources are at the root of rising disparities in access to health services.

3.2.1 Decentralization and geographical inequities

Financing of health services is highly decentralized. Government Financial Statistics show that township, county, prefecture and provincial Governments execute about 90% of Government

²¹ Third National Health Services Survey (NHSS), 2003.

²² Rao Kequin (Ministry of Health). “Initial Analysis of the 3rd National Health Service Investigation” July 1, 2004.

²³ Until 2000, statistics of urban and rural population followed official residence (which was assigned at birth, according to the official residence of the mother, in the household registration system). New statistical methods take into account actual residence for those staying over 6 months long.

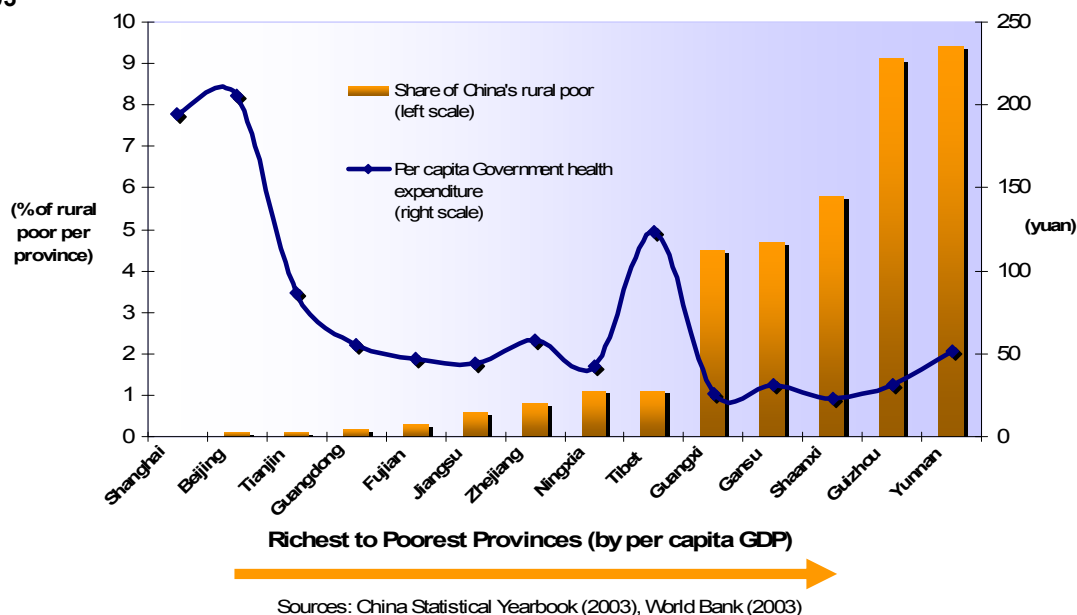
spending on health. This extent of decentralization of financing social services is considered excessive, even by international standards.²⁴

The problem of excessive decentralization has deep historical roots. Since the 1950s, local Governments were expected to provide the bulk of basic public goods, with little central Government contribution. The Cultural Revolution reinforced the notion that each local authority should minimize dependence on support from higher levels.²⁵ Later, in 1988, with the introduction of fiscal contracts, the central Government again formally distanced itself from any responsibility for financing local expenditures. Within the fiscal system, the Budget Law regularized the notion that spending responsibilities of local Governments were separate from Government revenue sharing considerations.²⁶

While unable to enjoy tax autonomy, localities are expected to generate revenues to cover the cost of public services. In the operation of local Governments, the urgent need to generate revenue overshadows the need for long-term strategic implementation of policy priorities. Local operational budgets are often consumed by immediate operational costs, and they are unable to pursue other policy priorities set centrally.

The result of this local-central funding mismatch is regressive because it severely affects resource poor communities. In poorer localities, local Governments lack the money needed to finance basic public services. Decentralization of responsibilities without sufficient funding allocations thus creates unfunded mandates in impoverished areas, leading to vast inequalities. The central Government's equalization grants to help poor localities pay for public services, although increasing, fall short of filling the gaps. National health account studies²⁷ show that the urban-rural ratio in per capita health spending rose to 3.6:1 in 2003. Per capita health spending largely mirrors regional GDP, though there are some exceptions. Government spending on health tends to be lower in provinces with the highest share of China's rural poor and less related to provincial GDP per capita, which is illustrated in the figures below.

Figure 3.2 Government spending on health tends to be lower in provinces with the highest share of China's rural poor: Total per-capita Government health expenditure and the share of China's rural poor, 2003



²⁴ In most of industrialized countries, central/federal Governments allocate over 70% of the total Government revenues. World Bank, 2002. National Development and Sub-national Finance.

²⁵ ? What is this reference: Wong, 1997, 11

²⁶ ? What is the reference for this

²⁷ Ministry of Health. China National Health Accounts Report-2004, Table 20. (2004)

Box 3.3 Subsidies to Health Providers

In the 1970s, Government budgetary subsidies covered the full cost of operating public health institutions. With the post-1978 reforms, allocations to health care facilities were fixed at a certain rate based on projections, and were not guaranteed to cover the full cost or any losses. As a result, facilities had to rely on their own revenues to cover up to 70% of their cost by mid-1990s. In 2003, subsidies fell even further and only provided 10% of the total cost for state-owned hospitals. This forced salary cutbacks for personnel and further increase in fees for services rendered. State-owned hospitals depend heavily on the revenues from drug sales and expensive medical treatments. Even public health institutions providing basic public health functions such as infectious disease control and surveillance, such as Centers for Disease Control and Prevention, are not fully funded by Government. They too are expected to generate revenue from service fees, for instance for their services related to immunization.

Sources: Xingzhu K, Mills A. Financing reforms of Public Health Services in China: Lessons for Other Nations. *Social Science and Medicine*. 2002; 54:1691-8; Ministry of Health. China Statistical Yearbook 2004, Table 4-7-1; Gong XG. Increasing the investment in public health and reforming the financing system of public health. *Chinese Health Economics*. 2003, 22:13-5.

The economic incentives built into the health financing system have led to over-provision of specialized services and expensive medicines for those who are able to pay, and under-provision for those who cannot. While rising fees are forcing the poor and low-income population groups to minimize their use of health services, underutilization has become an urgent problem – particularly in most rural health facilities, such as township hospitals. Failure to seek medical attention when sick also creates risk for entire communities as diseases occasionally spread. Once these impoverished citizens come to medical and health attention, they are often offered goods and services which are profitable to the facility but may not be appropriate. One specific example is the trend towards over-prescription of antibiotics which is reaching dangerous levels.³⁰

The pharmaceutical sector provides an illustration of distorted incentives and even conflicts of interest generated by the pursuit of revenues. Hospitals are allowed by law to mark up medication charges by up to 15% at both the wholesale and retail levels if they own and operate their own pharmacy. To make further use of this pharmacy-hospital relationship and maximize profits, many medicines and treatments can be (and are) manufactured on site as a local and unregulated “generic” product. In addition, health service providers often enter into a contractual arrangement with pharmaceutical companies and receive a commission for selling new and expensive drugs. Sometimes, these medications relate to experimental treatments that are being tested on users without their adequate knowledge.

Along with the changing lifestyles, demographic shifts and advances in medical technology, the distortions in the health financing and delivery systems contribute to the rise in health care costs in China (Box 3.4).

Box 3.4 The soaring health care costs in China

During 1979-2004, the average total health expenditure per person increased nearly 8-fold, from US \$9 to US \$70. Total health expenditure grew at an average annual real rate of 11% – adding on average 0.2 percentage points annually to the share of total health spending in GDP. Assuming the current trends continue, total health spending will approach 8% of GDP in 2010, compared to 5.7% of GDP in 2004. From the equity perspective, it is important to note that overall, 60% of total health care cost were paid out of pocket in 2004. The rate of out-of-pocket payment is as high as 90% in rural areas.

Source: China National Health Accounts

3.2.3 Human resources in health

China reports abundant albeit unevenly distributed human resources. In urban areas, human health resources expanded significantly in the 1980s, with some redistribution to rural areas in the past decade (Figure 3.4).³¹ At 14.2 physicians per 10,000 population in 2003, China has approached the level of Singapore and Korea (15.0 and 19.4 per 10,000, respectively). Furthermore, China is one of

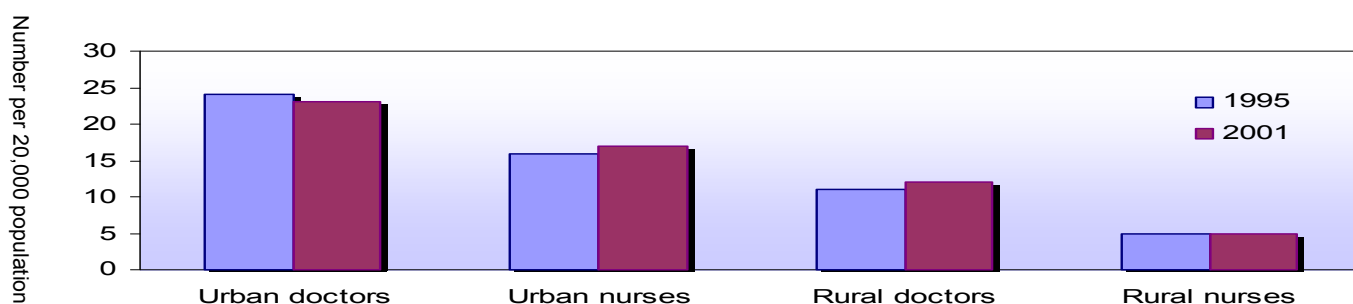
³⁰ Hu S, Liu X, Peng Y. Assessment of antibiotic prescription in hospitalised patients at a Chinese university hospital. *Journal of Infection*. 2003 Apr;46(3):161-3.

³¹ Wu XL, Rao KQ. 2001. An analysis of health resource development in China since 1980. *China Health Economics*, No. 11(2001); Ministry of Health (2003, Tables 2-1 and 2-7-1) and OECD (2001)

few countries where doctors outnumber nurses with 9.6 nurses per 10,000 population in 2003 compared to 44.0 in Singapore and 38.2 in Korea.³² The relatively high number of doctors compared with nurses and compared to other countries at a similar level of economic development raise concerns about utilization and cost-effectiveness. The continued high concentration in urban areas only further serves to illustrate the growing resource gap between the rich and poor. Recently, the Government has announced efforts to remedy this situation³³ but more comprehensive redistribution is needed.

The roles of the health care practitioners are not well-defined and, as illustrated above, gaps are apparent particularly in preventive and health promotion services, which internationally are more cost-effectively delivered by nurses. These questions are difficult to address in the absence of any national human resource strategy in health.

Figure 3.4 The number of doctors seems high in urban areas and low in rural areas, the problem of doctors outnumbering nurses is common across rural and urban areas: Health care providers in China per 1000 population, 1995 and 2001



3.3 Health reforms and change management

The weakly-defined role of the Government with respect to health makes policy planning and implementation both difficult and expensive. In the existing multi-agency setting, there has not been any obvious champion for comprehensive health reforms and improvements in the underlying public finance systems.

Progress has been made in recent years, as evidenced by multi-department cooperation and the establishment of centers to deal with specific problems. Some examples include: the recent improvements in infectious disease surveillance, avian flu preparedness, tuberculosis and HIV/AIDS treatment, and child delivery support. The example of close cooperation across many ministries and nongovernmental organizations to contain avian influenza has been particularly encouraging.

But critical areas lag behind. Governance structures related to health are clear across agencies and Government levels, and this has a far-reaching effect. Cost control mechanisms are out of balance, health-related safety management is ill-defined, and enforcement of laws and regulations is suboptimal. The promotion of healthy lifestyles and the prevention of chronic noncommunicable disease have not been prioritized appropriately.

The weak capacity to enhance governance structures related to health is particularly worrisome as hospitals, pharmacies, clinics, and private enterprises have all launched aggressive health-oriented commercial activities. Enforcement of cost controls, for instance, has been inconsistent and the prices of health services exceed the regulated level.³⁴ Important regulatory gaps exist – to name a few: hospital accreditation is not linked to pricing compliance and comprehensive safety records, doctors and health institutions are not constrained in their engagement in commercial (especially pharmaceutical) incentive programs which may not always represent the best options for their patients.

³² WHO. Core Health Indicators. (2005)

³³ China Daily, January 11, 2005. "Urban Doctors to Provide Rural Services"

³⁴ Liu XZ, Liu YL, Chen NS. The Chinese experience of hospital price regulation. Health Policy and Planning, 2003;15:157-163.

Safety standards and health regulations – pertaining to food, environment, roads and traffic, occupational and living conditions, drugs, hospitals, and laboratories, among others – are inconsistent in their design and enforcement across sectors and localities. Weaknesses in safety regulation and enforcement is particularly apparent at in rural areas, where township and village enterprises, (including dangerous coal mines) operate in a largely unregulated fashion and generate the majority of occupational diseases, disabilities and deaths in China.

Box 3.5 Examples of problems created by lack of oversight of multi-agency planning

- **Ambiguity** There are two official drug lists in China: one is made by the Ministry of Labor and Social Security, another by the State Food and Drug Administration. The Ministry of Health and its local branches have recently made their own lists for the new CMS.
- **Redundancy** Both Ministry of Civil Affairs and Ministry of Health have the authority to provide health financial protection related to catastrophic illnesses to farmers.
- **Confusion** The National Development and Reform Commission has made a RMB20 billion investment plan to improve the infrastructure of township health centers. But the effectiveness of such an investment is unclear, particularly since the majority of rural residents use village clinics rather than township health centers.
- **Competing Interests** Health departments recognize the oversupply of health care practitioners but education departments support institutions eager to recruit more students.
- **Partiality Without Consensus** Policies are often fractured and difficult to formulate because of the time required to gain consensus.

4. THE BROADER CONTEXT

4.1 Economic growth

Since 1979, China has made impressive gains in overall development, including a real annual GDP growth of 9.4%. During 1979-1984, economic growth was driven by the shift of labor from agriculture to rural industry.³⁵ Later, during 1985-1992, growth benefited from improved efficiency in capital allocation stemming from price liberalization and from opening to foreign trade. Further opening of the economy to foreign direct investment in the 1990s stimulated technological progress and its contribution to growth.

More recently, however, the Government has been relying more heavily on rapid accumulation of physical capital – which many analysts consider inefficient and difficult to sustain. This argues for policies to facilitate productivity improvement and private consumption. China's investment in physical capital has been remarkably high and expenditure on consumption very low compared to the lower middle-income countries. The investment and consumption rates in 2003 were 40% and 56%, respectively, in China compared to 25% and 72%, respectively, in lower-middle-income countries on average.³⁶ Assuming that recent policies and trends to sustain economic growth continue DRC projects that China's share of consumption in GDP will increase to 65% in 2020. Further, they propose that improvements in total factor productivity will be critical to sustain China's rapid economic growth in the future.

The future growth in total factor productivity in China will depend on Government policies across many sectors. The most important among these policies (listed in Box 4.1) is the promotion of health as a condition to acquiring skills and enhancing the quality of labor force. Urbanization and transition from agricultural to industrial and service sectors are all needed to boost productivity in China's economy. In the process, health challenges are generated which place new demands upon local and central Governments. If the current trajectory is continued, the share of urban population will rise from 39% in 2002 to about 55% by 2020 – rapidly approaching the average urbanization level of middle-income

³⁵ Since 1979 to mid-1990s, labor productivity in agriculture has been about one fifth of labor productivity in industries. The gap has been expanding since mid-1990s to about one sixth. World Bank, 2003. Promoting Growth with Equity, p. 29. Hua, Ercheng, 2002. "The development of the service sector in China and upgrading competitiveness of the secondary industry" in Li, Shantong and Hua, Ercheng (eds.) The Service Sector in the 21st Century of China. Beijing: Economic Science Press.

³⁶ DRC estimate (2003) and World Bank (2004)

countries. The task of coordinating economic and social development in this setting may be enormous.³⁷

Box 4.1 Policies to raise total factor productivity in China

- Continue openness to foreign direct investment and trade to benefit from international technological advances
- Stimulate domestic technological progress and technology diffusion
- Support the development of human capital and labor force quality
- Improve flexibility of and integrate domestic labor markets (labor mobility) and domestic financial markets (efficient resource allocation)
- Promote the shift of labor from agriculture to industrial and service sectors
- Facilitate agglomeration and urbanization
- Develop producer and consumer services
- Complete financial and enterprise sector reforms

Another test of growth sustainability in China relates to the need to boost private consumption a method to reduce the reliance on Government-led investment in physical capital. China's saving rates of households and enterprises, for instance, appear very high by international standards. In the case of enterprise, high saving rates reflect problems in both governance and the financial sector including incentive and institutional capacity problems in credit allocation and commercial insurance. In the case of households, high savings provide a needed cushion against insecurity caused by the weaknesses in the delivery of essential public services, coupled with low financial protection and high dependence on out-of-pocket payments for health services.³⁸

These examples illustrate that, over the long-term, China's economic performance will depend on addressing difficult structural and institutional issues. Among these issues, some of the most urgent and challenging relate to health.

4.2 Poverty and income inequality³⁹

China's impressive growth performance has been correlated with reductions in poverty and with social development. Using a standard international poverty line of \$1 per day consumption, an estimated 400 million people have been lifted out of poverty within the past 30 years, mainly benefiting from liberalization of agriculture and other rural industries. At the official poverty line, the number of China's poor decreased from 250 million in 1978 (31% of the rural population) to under 30 million in the early 2000s (3% of the rural population).

Out of the estimated 130 million people at or below the \$1 per day consumption in 2004, some 99 per cent lived in rural areas, but are no longer universally dispersed. Rural poverty is becoming concentrated in localities that are remote and weakly linked to the rest of the economy, disadvantaged in human and natural resources. The residents often suffer from water scarcity and low quality of land. Many such localities are in upland areas of western China, and in mountain villages, some of them even in relatively well-off counties. In addition, an increasing share of the poor fall below the poverty line because of loss of income and medical bills related to disability and illness.

The forces unleashed by reforms, namely economic liberalization with insufficient provision for equal opportunities, have negatively affected income distribution. Impoverished citizens have no opportunity to develop skills, maintain good health, seek new jobs, or be productive at a stable job.

Across provinces, disparities have been driven by the widening gap between the coastal and interior regions. Since 2000, the Government has succeeded in slowing the trend of rising inter-provincial income inequalities with its Western Region Development Strategy. The Western Region Development Strategy emphasizes infrastructure and environmental improvements in the

³⁷ Qiu Xiaohua pointed out: too slow progress of China's urbanization, which needs urgently accelerating, Xinhuanet, September 22, 2003. http://news.xinhuanet.com/fortune/2003-09/22/content_1093315_2.htm ; Wu Shangmin: Thinking on the China's Urbanization Road, China Economic Times, September 16, 2003.

³⁸ ? What are these references? Shi and Zhu (2004), Luo (2004), Wan et al. (2003)

³⁹ This section uses data from the China Statistical Yearbook (various years) and World Bank, Promoting Growth with Equity. (2003)

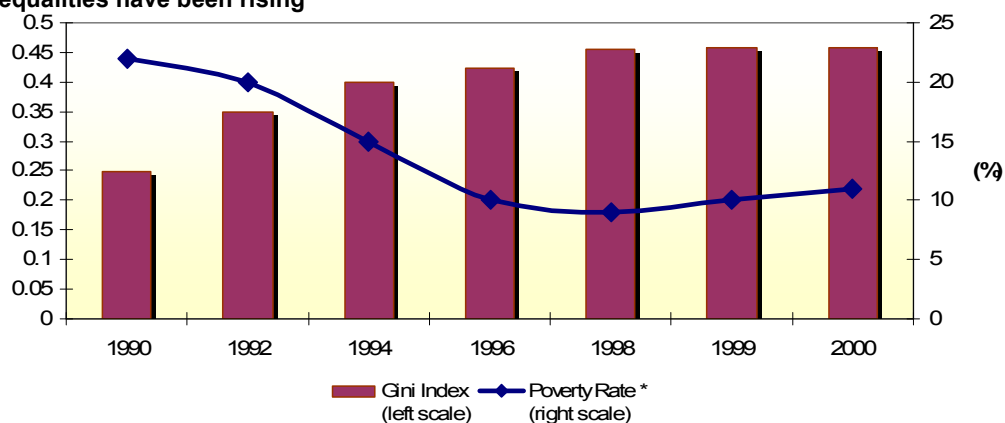
underdeveloped Western regions. More recently, the Strategy has included also local public service projects to promote social development.

Within provinces, intra-rural and intra-urban income inequalities have expanded. These trends partly reflect the weakness in China's social protection system, which has failed to provide a floor under those negatively affected by enterprise reforms and agriculture market liberalization. The shortage of skilled labor and the rigidities in labor mobility only serve to further encourage people to follow jobs and better income opportunities by migrating across China.

Finally, the rural-urban income gap has grown during most of the time since 1979 with the exception of the early 1980s and mid-1990s when rural incomes benefited from rural production and agricultural price reforms. As evidence of this, the urban-rural income ratio has been estimated at 3.1:1 in 2003 compared to 2.2:1 a decade ago.

Since the late 1990s, the trend of widening income disparities has become worrisome and started to overshadow China's impressive performance in economic growth and poverty reduction (Figure 4.1). China's Gini Index reached the level of 0.46 in 2002 and continues to rise, indicating that China is becoming one of the less equal societies around the world. The income inequalities have reached levels internationally associated with higher risk of social instability. This suggests that the underlying unfairness in access to opportunity is associated with inefficiency that may undermine sustainability of economic growth in the future.

Figure 4.1 While rapid economic growth continued, the pace of poverty reduction has been slowing and income inequalities have been rising



* Poverty rate is based on \$1 USD/day using official household income surveys
Source: World Bank 2003

4.3 Socio-economic transition and the role of Government

The post-1979 transition from a centrally planned to a market economy in China has been gradual, led by numerous economic reforms. This is in contrast to the big-bang approaches implemented during the preceding years of the Maoist period (1949-1976).

As the Government is formally diminishing its direct involvement in the economic and social sectors, officials at the local and central levels are trying to better understand the role of the state. Institutions for the market have been built from scratch and the Government is working to adjust its regulatory, enforcement, financing and provision responsibilities.

At the local level, interventions of Government in both financial and non-financial enterprises often appear excessive,⁴⁰ yet Government contribution toward social development and equity has been sub-optimal. This is the case in sectors other than public health as well.

Rebalancing and clarification of the role of Government is critical to sustaining economic growth, broader economic development, and social stability. In education, for instance, although the current ratio of Government spending on tertiary-secondary-primary education 10:2:1 is skewed toward

⁴⁰ World Bank. Improving city competitiveness through the investment climate: ranking 23 Chinese cities. (2004)

tertiary education, the Government has recently clarified its role by implementing universal mandatory 9-year schooling. This policy was supported using targeted pro-poor financing. Such clarification of Government role and emphasis on universal access to basic services, pro-poor targeting and equity, has yet to materialize in terms of health resources.

5. MOVING FORWARD: ANCHORING HEALTH IN CHINA'S DEVELOPMENT AGENDA

China's economic performance and commitment to advancement offers great promise for the future. Recent policies to constrain investment in physical capital while promoting productivity improvements and private consumption suggest that the Government is committed to sustaining economic growth. Subscribing to the ideals of a *xiaokang* (well-off in an all-around way) and harmonious society, the Government's "people's agenda" strives to achieve a significant improvement in the lives of the entire Chinese population by 2020. In this context, the Government has been promoting the Scientific Concept of Development and Five Balances of Development. (see Box 5.1)⁴¹

In this framework the Government is focusing its attention and resources in a more balanced way compared to the strong emphasis on economic growth during 1979-2003. This more broadly based approach to development is also reflected in the debate on relevant targets and indicators.⁴² In this context, the international commitment to the Millennium Development Goals (MDGs) – discussed below – has encouraged China to place more emphasis on health indicators in measuring its progress toward the objectives of *xiaokang* and harmonious society.

Box 5.1 The Five Balanced Developments

1. Balance urban and rural development
2. Balance regional development
3. Balance social and economic development
4. Balance the needs of human beings and the environment
5. Balance domestic and international development

Source: "Decision of the Chinese Communist Party Central Committee on Issues About Perfect Socio-marketing Economic Mechanism" adopted at the 16th Members Meeting of the Chinese Communist Party

5.1 China's domestic and international health commitments on the development agenda

Since adopting the Scientific Concept of Development, the Government has strengthened and expanded the scope of its policies to sustain progress in poverty alleviation and to reverse the trend of growing inequities – bringing health into their cross-sectoral scope.

5.1.1 Health and poverty alleviation

Compared to earlier poverty alleviation programs, the current policy is more advanced on several fronts.⁴³ First, the policy reflects an improved understanding of non-income dimensions of poverty in China. Second, it builds on China's recent progress in the development of poverty monitoring and measurement systems, which support gradual improvement of pro-poor targeting at both geographic and household levels under policy alleviation programs. Third, the policy emphasizes sustainable approaches and participatory planning at the village level.

The policy aims to improve the delivery of core public services, emphasizing rural health, education and infrastructure. Assistance at the community level is done by such means as introducing high-value crops and modern agricultural technologies. Rural enterprise and private business in less

⁴¹ The decision to promote the Scientific Concept of Development and Five Balanced Developments was formally made at in October 2003, at the Third Plenary Session of the 16th Chinese Communist Party Central Committee.

⁴² *What is overall Xiaokang--Interview with He Keng*, Deputy Director of the State Statistics Bureau , Xinhua Net, November 18 2002. http://news.xinhuanet.com/newscenter/2002-11/18/content_632415.htm.

⁴³ China's main poverty reduction policy for 2001-2010, called the Development Orientated Poverty Alleviation Program in Rural China, focuses on lifting from poverty the 30 million poor with annual per capita incomes below RMB 625. RMB625 was officially determined as the absolute poverty line in China in 2000. This poverty line applies to rural areas (and nearly all living under the absolute poverty line are rural residents); urban areas have established their own poverty lines reflecting the differences in the local levels of cost of living.

densely populated areas are strongly encouraged. The Government has invited NGOs and donor organizations to participate in this wide-scale poverty alleviation effort as well.

Most countries at China's income level provide basic health insurance along with immunization and basic preventive care, in the context of a tax-funded universal basic health care with a strictly defined minimum benefit package. To reduce the vulnerability of the poor, the Government has been considering income maintenance and novel basic insurance schemes in rural areas. Some urban areas with high poverty rates would also be eligible for these entitlements. Acceptance and implementation of this assistance plan would require infrastructural change and major modifications to existing schemes.

5.1.2 Health in promoting growth with equity

Studies have suggested that a policy package that would be capable of sustaining rapid economic growth while promoting equity must include five areas:⁴⁴ investing in people, promoting the diffusion of technology, facilitating urban agglomeration, expanding consumer and producer services, and rising farmers' prospects. Each of these focus areas has been among the priorities set by China's Government in 2003.

In its Scientific Concept of Development the Government has recognized that investment in health, education and other social services is crucial for achieving rapid, efficient, equitable and sustainable development. Furthermore, China's 2003 SARS epidemic generated awareness and new initiatives to address the inadequacies in the public health system. Box 5.2 illustrates the extent of Government's commitment to improve public health in the aftermath of SARS. Disease prevention and control mechanisms along with health emergency management system have been further strengthened as the Government has committed to addressing the emerging challenges of Avian influenza in 2005.

Box 5.2 Commitment to improve public health since 2003

In the aftermath of the SARS epidemic, the CCPCC put forward two important initiatives: Improvement of the Socialist Market System in 2003 and the State Work Report in 2004. Both initiatives have served to place public health higher on the national agenda.

The Government launched a successful effort to contain the SARS virus and formed long-term strategies to prevent future epidemics. In 2003, the Government successfully implemented a series of emergency measures including the creation of a special emergency fund, provision of a guaranteed access to SARS-related diagnostic and clinical services, improvement in hospital infection control, massive social mobilization and public education, and creation of a special surveillance system to rapidly detect and isolate potential SARS cases. During 2003-2004, an estimated RMB5 billion was allocated to support health infrastructure, staffing, and service delivery related to SARS. Furthermore, the Government has launched new infectious disease legislation, has worked toward expanding access to basic immunization, focusing on EPI and Hepatitis B, and adopted new operational guidelines for public health.

In effect, China's achievement vis-à-vis SARS involved a rapid expansion of the role of Government to fill gaps in the system of public health. As a result, a national consensus has emerged that the Government needs to re-assume greater responsibility for public health functions and services, including health surveillance, reporting, regulation, and prevention and control of infectious diseases.

In the context of the preparation of China's 11th Five-Year Plan for 2006-2010, DRC and the United Nations Agencies among others call for more Government spending in health (that is, investment in human rather than physical capital). As a basis for promoting sustainable growth with equity, China has recently recommended to the United Nations that public health be further integrated into national economic and social development schemes.⁴⁵ Redistribution of health resources can create difficult situations, but policy reforms that specifically address the underlying structural problems in both the public finance and health systems might help facilitate the transition.

5.1.3 Millennium Development Goals and other international commitments

⁴⁴ World Bank. Promoting Growth with Equity. (2003)

⁴⁵ Zhang Yishan, China's Deputy Permanent Representative to the United Nations. Resolution on Capacity building in the field of health. November 30, 2005.

China's Government has made many international commitments to a wide range of health targets, best exemplified by its acceptance of the MDGs. Six of the eight MDGs relate to health, calling for reductions in child malnutrition, child mortality and maternal mortality, combating communicable diseases such as HIV/AIDS, malaria and tuberculosis. The focus on health in the MDGs emphasizes the importance played by health in reducing poverty and improving the living standards of the world's population.

China is ahead of schedule in achieving most of the MDGs, benefiting from the positive effects of both rapid economic growth and targeted Government programs. Closer examination of the situation reveals that despite improvement in some indicators, the pace of development across disadvantaged and poor localities is slow.

Targeted actions of the Government seek to address some of the specific gaps. Box 5.3 provides a brief overview of China's progress and actions toward achieving the MDGs in health.

Box 5.3 China's progress toward achieving the MDGs in health

Working with international partners, China has achieved remarkable progress in reducing the prevalence of malnutrition and in combating tuberculosis and HIV/AIDS. Closer look beyond the aggregate figures, however, reveals major challenges at the local level. To address these challenges, China particularly needs to build institutional capacities of local Governments in implementing targeted programs and delivering public services.

The rate of decline in malnutrition exceeds the MDG target in aggregate. The task for the Government is now to address the slower pace of decline among children in rural areas.

In tuberculosis, the detection rate has been improving, reaching 60 percent by end 2004. Over 90 percent of the population now has access to free tuberculosis treatment in the Government-sponsored directly observed treatment program. More than 90 percent of patients have been treated successfully. Tuberculosis, however, remains far from being controlled, with persistently high rates of multi-drug resistance, and remains at the top of Government health agenda.

China's response to the HIV/AIDS epidemic has been effective particularly in terms of commitment by the national leadership and provision of treatment, care and support. Clusters of high prevalence are constrained geographically and among specific sub-groups. Wider population is, however, at risk, and the Government is working toward enhancing public awareness.

Regarding maternal and child mortality, as discussed in this report, the aggregate progress masks major disparities. The marginal, rural poor and ethnic minority populations tend to be excluded from the current Government strategies and interventions. Hospital delivery rate has risen, but so has in-hospital maternal mortality, suggesting quality problems in obstetrical care in poorer localities. Furthermore, China has yet to develop national strategy on neonatal mortality, which now represents almost 60% of total under-5 mortality, two-thirds of which during the early neonatal period.

In line with its commitment to the MDGs, China has been strengthening its policies toward promoting maternal and child survival. Since 2005, Ministry of Health has been working jointly with WHO, UNICEF and UNFPA to review the challenges on maternal and child survival in China. The goal is to define an equitable and affordable essential package of maternal and child care to be universally accessible and financed from public sources and health insurance.

China has also made an important commitment to better health by signing the Framework Convention on Tobacco Control in November 2003. Since this momentous pledge, China's Ministry of Health has taken further steps to improve public awareness of the health risks related to smoking and inhaling second-hand smoke.

5.2 Optimizing the role of Government in health

Lessons learnt by China over the past half a century suggest that the Government must pay significant attention to securing access to basic health by the poor and vulnerable population groups – for the benefit of China's future economic growth, poverty reduction and equity. The health of the entire population is at stake. Current strategies should not merely be a return to tactics in the 1950s-

1970s because the social conditions and health situation of that era no longer apply. Rather than emphasizing the direct involvement of Government in service delivery, the focus should be towards optimization of specific functions. High impact focus areas for the people's Government include regulation, enforcement, social protection, fair resource allocation and the promotion of equality.

To this end, major positive changes have occurred since the Government adopted its Scientific Concept of Development. Efforts are underway to clarify functions across the different Government levels and within the many ministries and high-level institutions that share health-related responsibilities. Since the release of the DRC report on the results of the post-1978 reforms⁴⁶, public debate has become very lively. This public dialogue has contributed to the recognition of China's key health challenges by China's top leaders. This new transparency has served to instill trust and strengthen the position of the Government as its role in the health system evolves.

5.2.1 Priority objectives in health

There has been significant debate surrounding the prioritization of objectives in health for China. The growing consensus is that the Government should focus efforts on the promotion of equitable access to basic health at affordable cost and adequate quality.

In order to achieve this objective, the need for pro-poor strategies and universal access to basic health services must be acknowledged. The design of an appropriate essential health package is central to this theme. Finally, the Government would need to establish a proper mechanism for implementing equitable access to basic health, which would involve a coordinated approach to health policy across ministries and institutions involved in health in China.⁴⁷

5.2.2 High-level coordination and political will

Only a coordinated approach to health problems can deliver the comprehensive policy and system reform that are needed. It has been increasingly recognized in China that the Government needs to provide a clear vision, strong direction, and decisive leadership for all players involved in health with respect to the Government's priority objectives and role in health. Ministry of Health would play a leading role with respect to Government health policy.

A coordinating body, perhaps a high-level committee, possibly within the State Council, is needed to direct health-related ministries and relevant institutions to work together more efficiently. The committee would ensure that public health functions within the numerous ministries and provinces are well coordinated. Issues controlled by other ministries, like environmental pollution, bio-safety, tobacco regulation and taxation, nutrition, traffic control and road safety, sanitation, and basic health education in schools, would be harmonized in line with Government health policy. This oversight of this high-level committee would make certain that policies affecting health fit into the larger vision for a healthier China.

Most importantly, achieving greater equity in health in China will require an immense political resolve. The single biggest challenge will be securing the political willpower to promote the wellbeing of China's entire population, regardless of political influence or strength of the voice.

⁴⁶ This work was developed as part of the CMH work in China.

⁴⁷ These objectives are further elaborated in Advancing Social Development in China: Contribution to the 11th Five Year Plan (2005) published by the UN Country Team China, Occasional Paper No. 1. Annex 2 provides seven strategic priorities to improve health outlined in the Health Situation Assessment (2005) by WHO in cooperation with United Nations Health Partners in China and with the support of China's Ministry of Health.

ANNEX 1

China's Health Risks

China's economic and social development has been associated with a changing profile in the health risks facing China's population. While significant health risks are still associated with poverty and underdevelopment particularly in rural areas, new health risks are emerging largely driven by industrialization and urbanization. This annex provides a summary, focusing on the risks arising from nutrition, environment, life style and workplace.

1. Nutrition

Under-nutrition China's improved access to food has led to an overall drop in underweight children – from 19% to 11% between 1990 and 2000. Stunting fell from 33% to 11% between 1990 and 2000.⁴⁸

Still, the prevalence of malnutrition in rural areas is three times higher than in urban areas. More than 40% of children born in the provinces of Western China are considered mildly or moderately stunted. Nationwide, 1 million newborns (5.9% of all infants) are born underweight. In poor counties the rate is 12%.

Furthermore, nutritional status of the low-income group declined significantly in the 1990s.⁴⁹ This decline has been attributed to the sharp increases in the price of food, education, housing, and health services, driving up the cost of living at a pace surpassing income growth for low-income households.

Vitamin and Mineral deficiencies China has made substantial progress toward improving Iodine Deficiency (IDD) through universal salt iodization in 1999. Iodine deficiency remains a problem in a few provinces, namely Tibet, Qinghai, Xinjiang and Hainan.

A significant problem across many provinces is, however, iron deficiency – anemia, and folate deficiency. The prevalence rates of anemia in 2000 were 41% in rural areas compared with 28% in urban areas among women of childbearing age, and 27% in rural areas compared with 12% in urban areas in children under-five years of age. Folate deficiency has led to excessively high levels of neural tube defects in rural areas of some provinces – for instance, 19 neural tube defects per 1,000 births in Shanxi province in 2000.

Obesity Some 27% of urban children aged 10 to 12 are reported overweight. In the major urban centers of Shanghai, Tianjin and Beijing, around 15% of the adult population are classified as either overweight or obese. Overall, the prevalence of overweight and obese people in China is estimated at 22% and 3%, respectively.⁵⁰ Diseases associated with obesity, such as diabetes and cardiovascular impairment, are becoming serious public health issues. Urbanization and rapid expansion of the food industry, supported by aggressive marketing of processed and "fast" food, have contributed to consumption patterns that are associated with obesity.

2. Environment

Massive industrialization, which has facilitated China's economic growth, has added to the enormous environmental challenges threatening health in China. Air and water pollution trigger diseases, disability and premature death, and cause economic cost that in 1990s were estimated in excess of 9% of GDP.⁵¹ The negative health effects of China's excessive industrial air pollution and water contamination by industrial and municipal waste and by overuse of chemical fertilizers and pesticides have been increasingly recognized and prompted adoption of strict environmental laws and regulations. Enforcement, however, remains very weak and the trend of environmental degradation is being only slowly reversed with uneven results.

⁴⁸ Ministry of Health. National Nutritional Surveillance System. Underweight and stunting is measured by <-2 SD weight and height for age.

⁴⁹ Meng X, Gong XD, Wang YJ. Impact of Income Growth and Economic Reform on Nutrition Intake in Urban China: 1986-2000. IZA Discussion Paper No. 1448 December 2004.

⁵⁰ Wenjuan E, et al. A study on epidemiological characteristics of obesity in Chinese adults. Chinese Journal of Epidemiology 2001;22:129-132.

⁵¹ Guang X. An estimate of the economic consequences of environmental pollution in China. In Smil and Yushi, Project on Environmental Scarcities, State Capacity and Civil Violence. Cambridge: Committee on International Security Studies. (1997)

Air The link between air quality and pulmonary disease is undeniable, whether exposure is active or passive. In 2002, three quarters of the Chinese urban areas suffered from air quality that fell short of China's national standards and pulmonary disease was the second leading cause of death in China.

Air-quality control has been a major focus of Government attention since the 1990s. National emissions of major air pollutants, such as sulfur dioxide and particulate matter, have declined since 1996. But new issues are emerging. Emissions from motor vehicles have worsened considerably in major cities. In 2002, sixteen of the 20 most polluted cities in the world were in China.⁵² In rural areas, indoor air pollution is a huge problem related to the use of solid fuels by households.⁵³

Water Water availability and quality are a critical problem, particularly in Northern China.⁵⁴ Although there has been rapid progress, by 2003, only 34% of China's rural population of China, compared with 96% of the urban population, had access to safe piped water; and 20% of the rural population had only unhygienic water (such as the water of rivers, lakes, irrigation canals and ditches) to drink.⁵⁵

Groundwater quality in many areas of China is expected to deteriorate over the years ahead as a result of industrial and agricultural emissions and municipal waste disposal. High levels of arsenic and fluoride in underground sources of drinking water are a major problem causing birth defects and diseases in some parts of the country.

Sanitation The problem of sanitation has been largely resolved urban areas but remains grave in rural areas. As much as 80% of rural households, compared to 13% of urban households, have no access to sanitary lavatory.⁵⁶ This is worrisome in the context of international research that shows the negative effects that the lack of sanitation may have on human health.

3. Life style and workplace

Tobacco Since the 1990s, the smoking rate among those aged 15 years and above has been declining. But surveys suggest that about one half of China's male population (and some 3% of women) smoked in 2003. The overall smoking prevalence rate among those aged 15 years and above was 26% (24% in urban areas and 27% in rural areas). Every smoker consumed on average 16 cigarettes a day. In contrast to the declining prevalence of smoking, the number of heavy smokers and the quantity of smoking among smokers increased.⁵⁷ More than half of children in China are exposed to second-hand smoke.⁵⁸ Such exposure is related to increased rates of lower respiratory tract infections, middle ear disease, chronic respiratory symptoms, asthma, decreased lung function, and an increased rate of sudden infant death syndrome.⁵⁹

Although China has signed the Framework Convention on Tobacco Control and the Ministry of Health has taken steps to improve the awareness of smoking risks, reducing tobacco use faces many challenges. For instance, understanding of the dangers of smoking seems limited, with 60% of adults admitting to know very little about the dangers of smoking and inhaling second-hand smoke.

Alcohol National and regional surveys in China show that, although 80% of those aged 15 years and above never drink (as of 2003), alcohol consumption and alcohol-related problems are rising.⁶⁰ A study in Wuhan, in Hubei province, found that nearly 15% of the population, compared to the national

⁵² The World Bank. World Development Indicators. (2002)

⁵³ WHO. Environmental Health Country Profile-China. Draft. (August 2004)

⁵⁴ SEPA (2003) provides surveys indicating biological contamination of drinking water supplies with arsenic, fluoride and other inorganic materials.

⁵⁵ National Health Services Survey (2003)

⁵⁶ National Health Services Survey (2003)

⁵⁷ National Health Services Survey (2003) Chinese Academy of Preventive Medicine. Smoking and Health in China: 1996 Prevalence Survey of Smoking Patterns. Beijing, China: Science and Technology Press. 1997 ; Liu BQ, et al. Emerging tobacco hazards in China: 1. Retrospective proportional mortality study of one million deaths. British Medical Journal 1998; 317:1411-22.

⁵⁸ Chinese Academy of Preventive Medicine. Smoking and Health in China: 1996 Prevalence Survey of Smoking Patterns. Beijing, China: Science and Technology Press. (1997)

⁵⁹ WHO. International Consultation on Environmental Tobacco Smoke and Child Health. NCD/TFI/ETS/99. (1999) Available online at: http://www.who.int/tobacco/health_impact/youth/ets/en/

⁶⁰ Alcohol & Alcoholism Vol. 39, No. 1, pp. 43-52, 2004 doi:10.1093/alcalc/agh018, available online at www.alcalc.oupjournals.org

estimate of 8.2% (15% among men and 1% among women) could be defined as alcohol abusers in 2002-03.⁶¹

In addition to the social disruption it causes, alcohol abuse has serious health consequences. The most striking problem is alcoholic liver disease (ALD), which is not as common in China as in western countries. But, in recent years, along with the increased use of alcohol that comes with improved living standards, the number of drinkers suffering from ALD has risen quickly. A study in Xi'an, Shaanxi Province, found that among the typical male drinkers questioned, 6.1% of them had alcohol liver disease.⁶²

Physical activity Rapid urbanization and reallocation of labor from agriculture to industrial and service sectors, that have been internationally important contributors to economic development, promote sedentary lifestyles. A decline of physical activity among the Chinese has been spotted in surveys and deserves attention as part of broader health promotion policies.

Occupational risks Workplace risks are a major source of disease, injury and death in China. China's occupational accident rate in 2003 was estimated at 1.3 per 1000 of workforce with 15.4 fatalities per 100,000 in workforce.⁶³ As a comparison, the International Labor Organization estimates the risk of fatality at 8.3 per 100,000 of workforce worldwide.⁶⁴ In China, the cause of 85% of all occupational diseases and injuries is coal mining. In 2003, coal mining was associated with 558,000 reported cases of pneumoconioses⁶⁵ carrying a 32% mortality rate.

⁶¹ Zhang JF, et al. Alcohol abuse in a metropolitan city in China: a study of the prevalence and risk factors. Society for the Study of Addiction. Addiction 2004;99:1103–1110. ; National Health Services Survey (2003)

⁶² Lu XL, et al. Risk factors for alcoholic liver disease in China, World Journal of Gastroenterology 2004;10:2423-2426.

⁶³ China Occupational Safety and Health profile

⁶⁴ WHO. Situation analysis for health at work and development of the global working life. (2004)

⁶⁵ Pneumoconioses is defined as lung disease resulting from the chronic inhalation of inorganic dust.

ANNEX 2

Strategic Priorities to Improve Health in China

In cooperation with United Nations Health Partners in China and with the support of China's Ministry of Health, WHO put forward seven strategic priorities to improve health – namely to address the disparity in the level of people's health and in their access to health services – in China.

These strategic priorities are outlined in China Health Situation Assessment (2005) and briefly summarized below.

Recommendations of the Health Situation Assessment of the People's Republic of China

1. Concentrate on the agreed priority objectives in health
 - *Provide vision and leadership*
 - *Focus on priority public health programs*
2. Foster equity in the public health system
 - *Define the scope of public health across rural and urban areas*
 - *Focus on countrywide access to and utilization of the public health system*
3. Raise efficiency and quality in health service
 - *Modify the supply of resources and the structure of health service delivery to promote efficiency*
 - *Build incentives, human capacities, and institutional mechanisms that promote quality*
4. Reform health financing
 - *Develop a medium-term health investment plan that strikes a balance between fiscal affordability and health needs*
 - *Revise the intergovernmental fiscal system to give sub-national Governments enough funding*
5. Enhance the ability to develop health policies
 - *Expand reporting, surveillance and analysis of health information to provide timely and objective evidence for policy formulation and implementation*
 - *Improve the ability of the Government to create and adjust policy based on appropriate indicators*
6. Advance comprehensive, high-level coordination
 - *Establish a high-level committee to coordinate policy responses and build a coherent health policy*
 - *Embrace hospitals in public health programs and promote cooperation among health service delivery institutions*
7. Build a better system of accountability and enforcement
 - *Use many channels of information toward accountability*
 - *Boost institutional ability to enforce health laws and regulations*