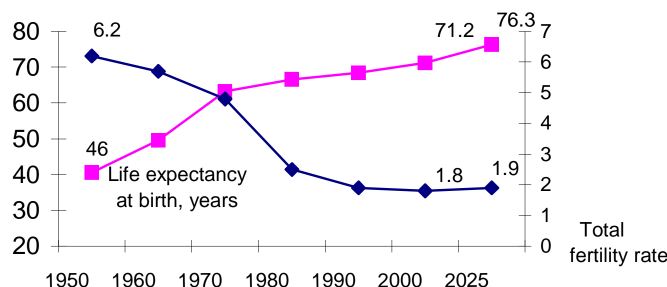
CHINA

1. CONTEXT

1.1 Demographics

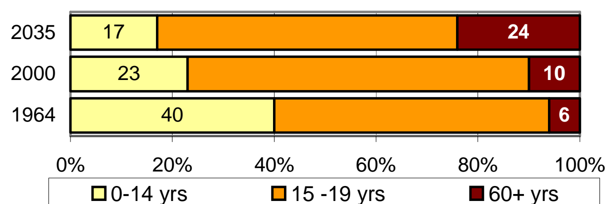
China is the most populous country in the world, with more than 1.3 billion citizens. Population growth rates have slowed and life expectancy has risen in recent decades (Figure 1).[1] While a child born in China in the 1950s could expect to live 46 years, one born in 2000 could expect to live for over 71 years.

Figure 1. Life expectancy at birth and total fertility rates, 1950-1955 to 2025-2030 projections



Rapid success in reducing fertility, however, has had several important impacts. First, the 2000 census estimates that 117 boys were born for every 100 girls for first births, but this ratio quickly rises to 152 for every 100 for second births.[2] In addition, China's population is ageing rapidly. One in four people living in the country in 2035 will be aged 60 years or older.[3] Population ageing leads to a shift towards chronic diseases and disabilities and pressures on the health system to address more complex health conditions that generate higher costs. In addition, the tradition of providing long-term care at home for elderly parents and grandparents will be challenged in the light of the one-child policy.

Figure 2. Population of China by age group (%), 1964, 2000, 2035



In line with the Government's policy to accelerate urbanization, half of the population will be living in urban areas by 2030 (Figure 3),[4] placing great pressure on water, air and electricity resources.

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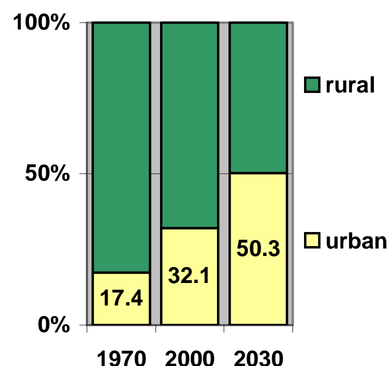
1 *EarthTrends*. World Resources Institute.
2 Population Reference Bureau
3 Population Reference Bureau
4 *Op cit.* Ref 1.

Figure 3. Urban population (%), 1970, 2000, 2030



1.2 Political situation

China's 11th Five Year Plan (2006-2010) forms the basis of the Government's current economic and social development efforts. In continuity with the 10th Five Year Plan, the 11th Plan aims to sustain the rapid and steady development of China's 'socialist market economy' while, in addition, aiming to achieve the 'five balances':

- *Balance between urban and rural development*: The gap between urban and rural areas increased during the 1990s for some important economic and health indicators.
- *Balance in regional development*: The Government is promoting development in the western regions in an effort to address the regional imbalances that have grown over time.
- *Balance in social and economic development*: The Government has made a commitment to focus more on social issues, including poverty, education, medical care and public health, in its overall goal to build a well-rounded better-off society.
- *Balance between human beings and nature*: Industry, agriculture and humans are competing for scarce resources, including water and air.
- *Balance between domestic and international development*: This balance promotes international cooperation and emphasizes the importance of fulfilling international commitments.

The 11th Plan includes two key quantitative targets:

- to achieve an annual gross domestic product (GDP) growth rate of 7.5%, with the goal of doubling 2000 per capita GDP by 2010; and
- to reduce energy consumption per unit of GDP by 20%, and the total discharge of major pollutants by 10%, by 2010.

It also includes a number of strategic priorities and major tasks, including: rebalancing China's pattern of growth; deepening reforms and opening up further to the outside world; constructing a 'new socialist countryside'; promoting more balanced development among the different regions; and increasing capacity for independent innovation.

To enable a larger proportion of the population to take advantage of the opportunities afforded by economic growth, future programmes aim to reduce poverty; develop the education, health, technology, scientific and cultural fields, among others; and strengthen the social safety net. The Plan is referred to as a 'people's agenda' because it focuses on inclusive social development that will make a measurable difference in people's lives by 2020.

1.3 Socioeconomic situation

China has made impressive gains in improving living standards, reducing poverty and maintaining strong economic growth since initiating market reforms in 1979. GDP averaged a real annual growth rate of

10% during the period from 1979 to 2006. During 1979-1984, economic growth was driven by the shift of labour from agriculture to rural industry. Between 1985 and 1992, growth benefited from improved efficiency in capital allocation stemming from price liberalization and from opening up to foreign trade. Further opening up of the economy to foreign direct investment in the 1990s stimulated technological progress.

China's earlier high health standards have played a pivotal role in the country's economic success. Impressive growth performance has been correlated with reductions in poverty and advancements in social development. Using the standard international poverty line of US$ 1 per day, an estimated 400 million people in China have been lifted out of poverty over the past 30 years. This is primarily a result of the liberalization of agriculture and other rural industries. At China's official poverty line, the rural population living in absolute poverty with an annual per capita net income below 668 Yuan (US$ 87) decreased from 250 million in 1978 (31% of the rural population) to 24 million in 2005 (3% of the rural population). New estimates of poverty using purchasing power parity (PPP) suggest even greater gains in poverty from 71%-77% in 1981 to 13%-17%. By whatever measure, China alone has accounted for over 75% of poverty reduction in the developing world over the last 30 years.

The global economic crisis has shifted downward projections of GDP growth to 6%-7% for 2009. Driven by a drop in the property sector and a weakened export market, it has been estimated that the economic decline has put 20 million migrant workers out of work in 2008-2009. The Government recognized the economic downturn in late 2008, and began to plan for its economic stimulus package. Approved in March 2009, the stimulus package amounts to 4 trillion Yuan (US$ 585 billion) for 2010-2011, for 10 key sectors. Of that total, 1.2 trillion is from the Central Government, and the remainder is to come from local governments, SOE, or the private sector. Some 63% of the total is dedicated to infrastructure (public and post-quake reconstruction). In addition to the stimulus package, the Central Government is investing substantial resources in alleviating the impact of the economic crisis in 2009, including investing 293 billion Yuan (US$ 43 billion) to improve the social safety net, offering 5 trillion Yuan in additional loans, and investing 42 billion Yuan (US$ 6.2 billion) to stimulate employment.

1.4 Risks, vulnerabilities and hazards

The projected decline in local revenues implies that local governments may be unable to mobilize resources for implementation of the health reform agenda. It could also lead to pressure on local governments to find resources locally via off-budget sources, including fees for public services. Central Government may view public health policies as less important than encouraging consumption (for example, fiscal policies for 2009 include maintaining stable prices for edible oils and increasing sales of tobacco and alcohol). The major health threats in underdeveloped areas of rural China include unsafe water, lack of sanitation, undernutrition, vitamin and mineral deficiencies, and indoor pollution. Emerging health threats related to the environment, workplace and lifestyle are becoming more evident. Air pollution and water contamination by industrial and municipal waste, as well as overuse of chemical fertilizers and pesticides, annually cost China over 400 000 lives.[1, 2]

The linkages between health and economic growth are intensifying as China seeks to sustain economic growth. The benefits of this growth, however, have not been shared equally and gaps exist in socioeconomic indicators between geographic regions, rich and poor households, urban and rural residents, and migrant and resident populations within cities. Up to 30% of poor people state that health is the single most important cause of their poverty. Ill-health can lead to poverty through reduced earning capacity and high out-of-pocket medical expenses that can be financially catastrophic. Poor health contributes to cycles of poverty that reduce physical capacity and erode economic productivity.

[1] Guang X. An estimate of the economic consequences of environmental pollution in China. Smil V, Yushi M, eds. *Project on environmental scarcities, state capacity and civil violence*. Committee on International Security Studies, 1997.

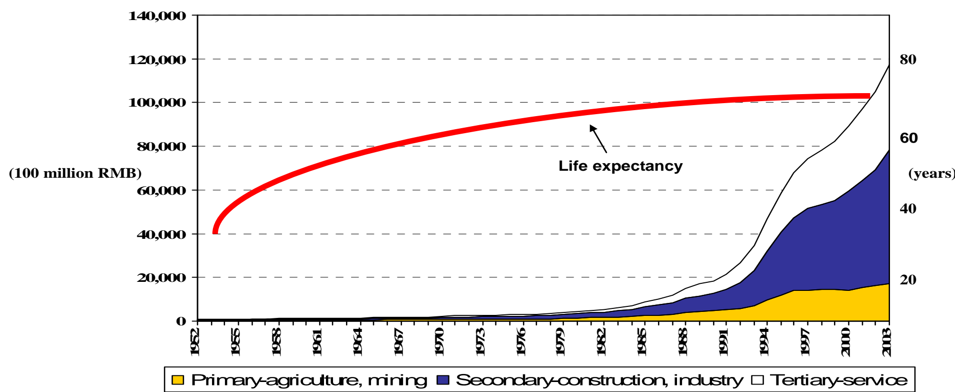
[2] Relatively easy availability of pesticides in rural markets and homes is also associated with China's internationally very high suicide rates among young rural women.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Publicly financed health programmes provided access to basic care during the 1960s and 1970s, especially in rural areas. Health outcomes continued to improve between 1980 and 2005, although at a slower pace. Figure 4 shows the increase in life expectancy over almost 50 years in comparison with economic growth. Other health indicators improved as well. By 2007, the maternal mortality ratio had declined to 36.6 per 100 000 livebirths, and the infant and under-five mortality rates to 15.3 and 18.1 per 1000, respectively. Immunization coverage of one-year-olds against tuberculosis and measles exceeded 90%, while malnutrition rates among the under-fives had declined to less than 10%. A critical health challenge relates to inequality in health outcomes. Life expectancy is also generally lower in rural provinces and those with higher poverty rates.

Figure 4. Life expectancy and GDP, 1952-2003



Source: China Statistical Yearbook 2004 and UNIDO analysis

2.2 Outbreaks of communicable diseases

China is one of 22 high-burden countries for tuberculosis, with the prevalence for all forms of the disease estimated at 194 per 100 000 people in 2007. WHO estimates that, each year, there are approximately 1 million new cases, of which 500 000 are infectious, smear-positive pulmonary disease.[1] Every year, approximately 200 000 people in China die due to TB . Multidrug-resistant tuberculosis (MDR-TB) is becoming a critical public health threat, and WHO estimates that China has 65 853 multidrug-resistant cases among new cases and 64 694 MDR among previously treated cases.

An estimated 700 000 people were living with HIV at the end of 2007. Although HIV prevalence in adults is currently low (0.05%), several provinces in central, southern and western areas of the country face serious concentrated epidemics, with the epidemic spilling into the general population in some areas. Yunnan, Henan and Guangxi provinces are the worst affected, with over 30 000 cumulative HIV cases reported in 2005. Sexual transmission is now the main mode of transmission. Among those living with HIV reported between January and October 2007, 37.9% of infections were through heterosexual transmission, 3.3% through homosexual transmission, and 29.4% via injecting drug use.[2] There are also indications of increasing HIV infection rates at antenatal sites.

Emerging disease threats include HIV/AIDS, severe acute respiratory disease syndrome (SARS) and influenza. Emerging infectious diseases, such as SARS, avian influenza (H5N1), and H1N1 type A influenza are important because of their epidemic potential. In addition to the illness and death they

[1] *Global tuberculosis control 2009: surveillance, planning, financing*. Geneva, World Health Organization, 2009.
[2] *Joint assessment of HIV/AIDS prevention, treatment and care in China*. Beijing, United Nations China, State Council AIDS Working Committee Office and United Nations Theme Group on AIDS in China, 2007.

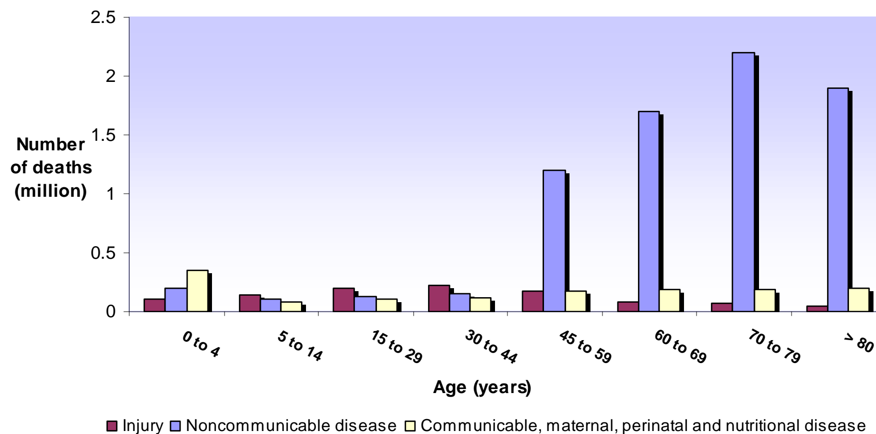
bring, they can cause social instability and considerable financial and economic loss. The SARS outbreak in 2003 affected 5327 people in mainland China and killed 348. Since 2003, 38 people in China have been reported to have H5N1 and 26 of them have died.

While China remains vulnerable to the health threats posed by emerging and re-emerging infectious diseases, known and preventable diseases such as malaria, cholera, schistosomiasis and filariasis continue to occur in the country despite the availability of effective treatment and preventive measures. The large-scale national malaria control programme, launched in 1955, successfully reduced the 30 million malaria cases that had been occurring annually before 1949. However, China still faces major malaria control issues in the border areas of the country's tropical south, and in the central area of the country, where malaria has re-emerged since 2001. Nineteen of 31 provinces, municipalities and autonomous regions are considered malaria-endemic, that is, they have reported at least one locally acquired case in the past three years. However, higher endemic counties have been concentrated in eight provinces. In 2008, all counties with incidence ≥1.0 per 10 000 came from Anhui, Yunnan, Henan, Hainan, Hubei, Jiangsu, Guizhou and Tibet, accounting for 86% of confirmed cases. In 2007, the malaria incidence rate was 2.0 per 100 000 population.

2.3 Leading causes of mortality and morbidity

According to the Third National Health Service Survey, conducted in 2003, a decline in infectious diseases of the respiratory and digestive systems was seen from 1998 to 2003, while circulatory, endocrine, digestive and kinetic system disorders rose continually over the same period. The disease profile resembles that of a developed country, with some 85% to 90% of deaths due to noncommunicable diseases and injuries. Figure 5 shows causes of death by age in 2003. Among the remaining infectious diseases, hepatitis B infection, TB and lower respiratory infections still account for significant mortality and lost DALYs.

Figure 5. Number of deaths by cause and age, 2003



Source: WHO World Health Report (2005)

2.4 Maternal, child and infant diseases

The country has remained polio-free since 1994 and the incidence of immunization-targeted diseases, such as measles and diphtheria, has declined significantly. Currently the Expanded Programme on Immunization also includes hepatitis B vaccine, with a rate of 88% for timely Hep B birth dose delivery in 2006. The Government recently expanded the immunization programme to include vaccines to prevent 12 diseases (TB, poliomyelitis, diphtheria, tetanus, pertussis, measles, hepatitis B, Japanese encephalitis, meningococcal meningitis, hepatitis A, rubella, mumps and measles, as well as leptospirosis, anthrax and epidemic hemorrhagic fever). Vaccines now exist for pneumonia and diarrhoea in young children and the Government will be considering whether and how to introduce these vaccines in the future. The 11th Five Year Plan stipulates that the immunization rate should reach more than 90% by 2010. The 11th Five

Year Plan also sets 2010 targets for infant mortality (17 per 100 000 live births) and maternal mortality (40 per 100 000 live births).

China has been remarkably successful in achieving maternal and child health goals, exceeding national targets. While regional disparities exist, since the mid-1980s, the infant and under-five mortality rates in China as a whole have continued to fall. National statistics show that the MMR decreased from 80 to 36.6 per 100 000 live births between 1996 and 2007,[1,2] and reductions occurred in the infant mortality rate (IMR) and under-five mortality rate (U5MR) to 15.3 and 18.1 per 1000 live births, respectively, in 2007.[3] Like other health indicators, MMR, IMR and U5MR are much higher in western China compared with coastal areas. Girls also continue to be disadvantaged. Significantly, the U5MR is much higher for girls (41 per 1000 live births) than for boys (30 per 1000 live births).

2.5 Burden of disease

Global burden-of-disease estimates produced by WHO indicate that 80% of deaths in China are due to noncommunicable diseases and injuries. Cerebrovascular disease, chronic obstructive pulmonary disease and heart disease account for nearly 50% of all deaths. The rankings based on disability-adjusted life years (DALYs)[4] also highlight the emergence of noncommunicable chronic diseases and injuries as the predominant health conditions. Much of the disability and death attributable to chronic diseases, particularly among working-age adults, could be reduced through a reduction in risk factors, including improvements in air quality, water and sanitation; reductions in tobacco and alcohol use; improvements in diet and nutrition; and increased exercise. It is projected that disabilities and deaths related to chronic diseases will result in a US$ 550 billion loss in productivity between 2005 and 2015.

The disease burden varies by age group. It is estimated that 70% of deaths among children less than five years of age are attributable to maternal, perinatal or nutritional conditions, many of which could be addressed through high quality health care, including sepsis, pneumonia, diarrhoea, measles and tetanus. Among children aged five to 14 years, the number of deaths is a very small part of the total disease burden; however, most of these deaths are attributable to injuries and accidents, including drowning and road accidents. For those between the ages of five and 44 years, injuries and violence account for an even larger share of deaths, at over 50%. Some 69% of disability and 80% of deaths among adults and older people are due to noncommunicable diseases.

Among the remaining infectious diseases, hepatitis B, TB and lower respiratory infections still account for significant mortality and lost DALYs, particularly among children. While infectious diseases attract enormous interest both domestically and internationally, injuries and violence contribute about 11% of total mortality each year, compared with 8.6% attributed to infectious diseases. In 2007, most injury deaths were attributed to suicide (28%), road traffic injuries (25%) and drowning (11%), with the suicide rate for women estimated to be 25% higher than that for men, and traffic injury mortality rates twice as high for males than for females.[5] Mental and neurological disorders are responsible for about 20% of the overall disease burden in China. More than 30 million children and adolescents under 17 years of age have behavioural and emotional problems, of which about 50%-70% need mental health services, but remain untreated.[6]

[1] National Maternal and Child Health Surveillance System

[2] *Millennium Development Goal Indicators: the official United Nations site for the MDG Indicators*. New York, United Nations Statistics Division, Department of Economic and Social Affairs. Available from: http://millenniumindicators.un.org/unsd/mdg/Default.aspx

[3] National Maternal and Child Health Surveillance System

[4] 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.

[5] *Turning the tide: injury and violence prevention in China*. Beijing, World Health Organization, 2006.

[6] *National Project on Mental Health (2002-2010)*, China Department for Disease Control and Prevention, MoH 2002.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

China's political commitment to health system reform was declared at the highest level when President Hu Jintao stated in October 2006 that all Chinese people should have access to affordable essential health services. The Government established a 14-ministry working group to be in charge of outlining future health care reforms, appointing the National Development Reform Commission and the Ministry of Health as lead ministries.

After three years of deliberation, in 2009, the group announced their national health reform blueprint. The plan's main objective is to provide universal coverage of basic health care by the end of 2020. Reforms are proposed in five areas: the public health system, the medical care delivery system, the health security system, the pharmaceutical system, and pilot hospital reform. The initial three-year implementation plan for 2009-2011 emphasizes several programmes, including improving the social health security system (urban employees, urban residents, rural CMS, and medical assistance programmes); establishing an essential medicines system; strengthening primary-level health care facilities; reducing disparities in public health care between regions; and piloting reforms in public hospital financing by reducing the reliance on drug sales for operational costs and salaries. The Government has committed to spend 850 billion Yuan (US$ 124 billion) on fulfilling the three-year plan (est 0.8% annual increase in [2008] GDP), 39% from Central Government. The Central Government allocation to implementing health reform in 2009 amounts to 118 billion Yuan, including 30.4 billion Yuan (US$ 4.4 billion) dedicated to insurance, 24.6 billion Yuan (US$ 3.6 billion) for public health and disease control, and 6.5 billion Yuan (US$ 2.4 billion) for construction.

Specific targets for 2009 include: (1) 29 000 township health centres built; (2) revised essential medicines list published; and (3) 15 Yuan government subsidy for public health. Targets for 2011 include: (1) 90% health insurance coverage for both urban and rural areas; (2) 120 Yuan government subsidy to urban residents' basic medical insurance and the new rural coooperative health insurance; and (3) 2000 new county hospitals, 3700 urban community health centres and 11 000 community health stations built or renovated.

3.2 Organization of health services and delivery systems

Economic growth has enabled wealthier households to benefit more from access to health care and medical technologies. However, most low-income households face important barriers in accessing affordable essential health services and medicine. Despite large-scale government infrastructure investment, the cost of health services remains a major barrier to accessing quality services, particularly for people in remote and rural areas.[1] Increasing levels of user fees are resulting in low usage of health services among low-income households, as medical care expenditure and the cost of health services are rapidly outpacing average incomes. Lack of attention to communicable disease treatment, in particular, could have a negative impact on the health of the community as a whole.[2]

While health insurance coverage is increasing, especially in rural areas, many people are underinsured and continue to face high out-of-pocket costs. While the health insurance schemes, particularly in rural areas, report high coverage, benefits are often limited to catastrophic illness; inpatient medical services frequently require pre-payment and reimbursement can be as low as 20%-30% of the total bill.[3] The technical quality of care is affected by incentives in the existing provider payment mechanisms. Benefits are also not portable across localities, which is a major concern for migrant workers.

Implementation of the Medical Financial Assistance (MFA) scheme for both the urban and rural poor depends on local fiscal capacity and thus access is inequitable across regions. For example, richer

[1] *An analysis report of the National Health Services Survey in 2003*. Tables 3-8-9, 3-8-6. Beijing, MoH 2004.
[2] Hu S, Liu X, Peng Y. Assessment of antibiotic prescription in hospitalized patients at a Chinese university hospital. *Journal of infection*, 2003, 46(3):161-163.
[3] Among many studies, including: Liu Y. Development of the rural health insurance system in China. *Health policy and planning*, 2004, 19(3):159-165.

municipalities, such as Beijing and Shanghai, can offer MFA to families living below the poverty line, but rural counties are generally supported by more modest local government budgets. Large geographical differences exist in health outcomes. Remote and rural regions face problems in making specialized care available to their populations, including emergency obstetric services and trauma, adequate facilities, and trained health professionals. This presents a major problem in implementing the government goal of universal health care access.

The availability and affordability of essential medicines needs to be improved. Inadequate access, quality and use of medical products and technologies are rooted in different factors, including the absence of a national medicines policy to guide and coordinate different stakeholders and policies in the pharmaceutical sector; the absence of a generics-substitution policy; and financial incentives in the health care system that contribute to irrational use. Senior-level officials have publicly recognized the problems in the pharmaceutical sector and the insufficient access to essential medicines. The Government is in the process of outlining reforms to improve access to quality safe essential medicines, modify the pricing system and strengthen medicine production and distribution systems.

3.3 Health policy, planning and regulatory framework

A major component of the health reform aims to better define government roles in the health sector. Important efforts have been made to reduce ambiguity and redundancy in responsibilities, as well as the competing interests among departments and in government roles in health across agencies.

Regulations related to public health and health care delivery systems are underdeveloped and poorly enforced, and monitoring capacity is weak. Most health facilities lack clinical governance systems, and important gaps exist in the regulatory system to ensure the quality of care. For example, hospital accreditation is not linked to comprehensive safety records, and doctors and health institutions are not restricted in their engagement in commercial incentive programmes. Deficiencies in clinical quality have resulted from financial incentives in the delivery system, lack of clinical treatment guidelines, inadequate government resource allocation, weak regulation among service providers, and the low capacity of health care personnel.

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

The overwhelming majority of the Chinese population seek out traditional Chinese medicine (TCM) to address their health problems. The Government promotes the development of a modern TCM industry, as well as the integration of TCM into the national health care system and integrated training of health care practitioners. In 2008, the Minister of Health identified several key priorities for TCM development, including increasing policy support for TCM , strengthening research on key TCM issues and building capacity for TCM research, training prominent TCM doctors and establishing well-known TCM hospitals and departments, improving and adapting TCM services to meet public needs, increasing access and quality of TCM services in rural and urban communities, and strengthening international cooperation and communication on TCM.[1]

However, a number of challenges to further development of TCM remain. There is a lack of unified, systematic regulations for assessing the safety and efficacy and ensuring the quality of TCM products. In addition, there are no national TCM standards or guidelines for TCM clinical trials. Evidenced-based TCM product testing and research are still needed. In view of the vast differences in the qualifications of TCM practitioners, the quality of TCM education needs to be strengthened and the management and supervision of TCM institutions need to be regulated.

[1] Word Report by Minister Chen Zhu at the Annual Health Conference, 2008.

3.4 Health care financing

Total health expenditures rose from 3% of GDP in 1978 to 4.5% of GDP, or US$ 112 per person in 2007.[1] Of this total, the Government contributed 20%, social health expenditure amounted to 34%, and individual out-of-pocket payments to 45%. Contributions from both the Government and social health expenditure have declined as a proportion of total health expenditure. The decline in the Government's contribution and the increase in individual out-of-pocket payments is due in part to rapidly escalating health care costs and the lack of incentives for cost or quality control in the health delivery system.

Public resource allocation is highly decentralized.[2,3] Township, county, prefecture and provincial governments administer about 90% of all government spending on health. While localities are given the responsibility to finance health care, however, local governments are unable to raise revenue through taxes to finance basic public services, especially in resource-poor communities. Government spending on health tends to be lower in provinces with higher numbers of rural poor. Thus, poor localities have access to fewer and lower quality services, for which they must pay out of pocket. The health reform plan aims to alleviate these differences and the Government has committed to spend 15 Yuan per person on a basic public health package.

Under the current health system, local health departments and other health care providers are expected to generate a significant share of their own operating budgets.[4] This provides an incentive to focus on more profitable curative care and medicines to generate larger profit margins.[5] Service fees are applied to public health goods, such as immunization and communicable disease control programmes that have broader economic benefits, leading to underutilization of health services by the poor and underinvestment in these programmes from a societal welfare standpoint. The health reform plan aims to resolve this problem by increasing public spending on basic health services, as well as reducing the reliance on medicines and service sales to fund facility operational costs.

3.5 Human resources for health

Key challenges in improving human resources for health include: improving the human resource strategy for health development; increasing capacity and technical qualifications; distributing staff more evenly nationwide; and creating a more rational balance among the different health care professions.

Over the last several decades, the Government has prioritized increasing the quality and technical capacity of health personnel with two to six years of professional training. However, capacity issues remain: 47% of health professionals have only technical secondary school diplomas and only 14% of health professionals have bachelor degrees or above.[6]

In addition, qualified staff are not well distributed across the country.[7] As in many other countries, poor and rural areas have not been able to attract and retain qualified medical staff.[8] After economic reforms were initiated, many experienced health professionals moved to hospitals in cities and areas with well-paying clinics. This poses an enormous barrier to the delivery of quality basic health services in remote and rural regions.

China is one of the few countries where doctors outnumber nurses. In 2008, China had 1.6 physicians per 1000 population and 1.2 nurses per 1000 population (compared with 15.0 physicians and 44.0 nurses per 10 000 people in Singapore, and 19.4 physicians and 38.2 nurses per 10 000 people in the Republic of

[1] *China National Health Account report (2007).* Beijing, National Health Economic Institute, 2007.
[2] In China, subnational governments are responsible for 70% of government expenditures. In contrast, in most industrialized countries, subnational governments are responsible for less than 30% of the government budget.
[3] *National development and sub-national finance:review of provincial expenditures*. Washington DC, World Bank, 2002.
[4] Liu XZ, Xu LZ: Evaluation of the reform of public health financing in China. *Chinese health resource*, 1998,1(4):151-154.
[5] Liu XZ, Liu YL, Chen NS. Chinese experience of hospital price regulation. *Health policy and planning*, 2003,15:157-63.
[6] Zhang JH, *Situation and development of the health workforce in China*. Beijing, Health Human Resources Development Center (HHRDC) Ministry of Health, China, 2007.
[7] Wu XL, Rao KQ. 2001. An analysis of health resource development in China since 1980. *China health economics*, 2001,11:38-41.
[8] Rao K. *Initial analysis of the 3rd National Health Service Investigation*. Beijing, Ministry of Health, July 1, 2004.

Korea).[1] The relatively high number of doctors compared with nurses raises questions about public investment in training and deployment to achieve the most cost-effective means of service delivery.

3.6 Partnerships

The Government has made many international commitments to a wide range of health targets, best exemplified by its acceptance of the Millennium Development Goals (MDGs). Six of the eight MDGs either directly or indirectly relate to health, calling for reductions in child malnutrition, child and maternal mortality, communicable diseases such as HIV/AIDS, malaria and tuberculosis; and increasing access to essential medicines. Supporting China's achievement of the MDGs provides an important organizational framework for donor coordination in the country, and the majority of donors have reflected this in their country assistance plans. The United Nations Theme Group on Health (UNTGH) is a government-donor forum for cooperation on health issues in China. WHO chairs and acts as Secretariat for the UNTGH, which comprises United Nations agencies, bilateral and multilateral donors, government agencies and nongovernmental organizations.

China is ahead of schedule in achieving most of the MDGs, benefiting from the positive effects of both rapid economic growth and targeted government programmes. It may be an appropriate time to develop indicators that reflect the current health challenges, including for the control of noncommunicable diseases, and stronger health policies and systems that could address inequalities in health outcomes.

The country has been taking a leading role in improving public health in the Region and the world, and has organized several important regional and global health events, promoting both multilateral and bilateral partnerships. In 2005, China initiated a resolution on Public Health in the United Nations, recommending that public health be further integrated into national economic and social development schemes as a basis for promoting sustainable growth with equity around the world.

China also made an important commitment to better health by signing the Framework Convention on Tobacco Control in November 2003. Ratified by China's National People's Congress in August 2005, the convention became effective in January 2006. 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, and to reduce smoking in public areas.

3.7 Challenges to health system strengthening

It is widely recognized that increasing the level of government spending needs to be done in conjunction with reform and regulatory programmes that provide incentives for quality, performance and health outcomes. WHO provides assistance to the Government in implementing its health sector reforms and national strategies that aim to achieve universal coverage of essential health care services by 2020 and to improve quality, equity and efficiency.

Since 2006, the Government has made an enormous effort to define its role in health more clearly. As many countries around the world attest, launching comprehensive health system reforms is very difficult on political and ethical, as well as technical grounds, and such reforms are further complicated by complex governance structures. In China, as in other countries, the single biggest challenge is securing the political will to balance the influence of interest groups and promote the well-being of the entire population, regardless of political influence, socioeconomic status or cultural background. The involvement of many stakeholders in the ongoing implementation of health reform gives every hope that China will succeed and set yet another example of successful reform that can inspire other countries.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	中华人民共和国国民经济和社会发展第十一个五年规划纲要
Specification	:	China's 11th Five-Year Plan
Web address	:	http://www.china.org.cn

[1] Core Health Indicators (2005). Geneva, World Health Organization.

Title 2	:	*2007 NPC & CPPCC Sessions*
Features	:	The National People's Congress (NPC) approved reports on government work, economic and social development, the central and local budgets, the work of the NPC Standing Committee, and the work of the Supreme People's Court and the Supreme People's Procuratorate
Web address	:	http://japanese.china.org.cn
Title 3	:	*Report on China's Economic and Social Development Plan*
Features	:	Report on the Implementation of the 2006 Plan for National Economic and Social Development and on the 2007 Draft Plan for National Economic and Social Development, delivered at the Fifth Session of the Tenth National People's Congress on March 5, 2007
Web address	:	http://www.china.org.cn
Title 4	:	*Building a new socialist countryside*
Features	:	China's central Government recently released an important policy document on "building a new socialist countryside," and established it as one of the primary objectives of the 11th Five-Year Guidelines for National Economic and Social Development (2006-10)
Web address	:	http://www.china.org.cn
Title 5	:	*The outline of the Eleventh Five-Year Plan*
Web address	:	http://en.ndrc.gov.cn/
Title 6	:	*Health, poverty and economic development*
Operator	:	WHO and China State Council Development Research Center. Beijing. 2006.
Web address	:	http://www.wpro.who.int/china
Title 7	:	*A health situation assessment of the People's Republic of China.*
Operator	:	United Nations Health Partners Group in China, July 2005.
Web address	:	http://www.wpro.who.int/china

5. ADDRESSES

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Website	:	http://www.moh.gov.cn
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