CHINA

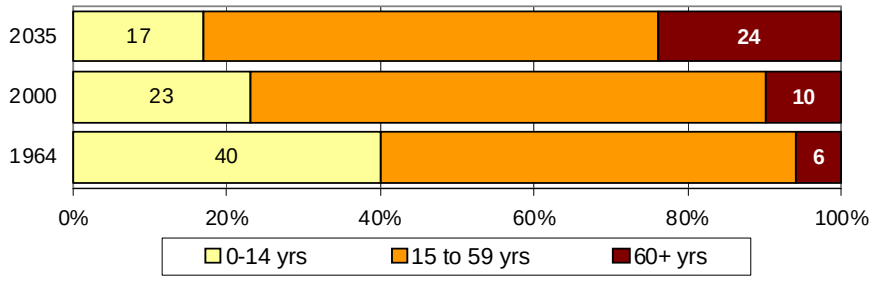
1. CONTEXT

1.1 Demographics

China is the most populous country in the world, with 1.37 billion people in 2010. However, its population growth rate has slowed and life expectancy has risen in recent decades. While a child born in China in the 1950s could expect to live for 46 years, the life expectancy of one born in 2010 is over 73 years.[1]

China's population is ageing rapidly. In 2010, the population aged 65 years old and above accounted for 8.87% of the total population.[2] In 2035, it is expected that one in four people will be 60 years or older (Figure 1).[3] Population ageing is leading to a shift towards a disease pattern dominated by more chronic diseases and disabilities, which will exert greater pressures on the health system, and 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 1. Population of China by age group (%), 1964, 2000, 2035



In line with the its policy to accelerate urbanization, the Government is shifting the population to urban areas. In 2010, 49.7% of people lived in cities.[4] The 12th Five Year Plan targets an increase in the urban population to 51.5% by 2015, placing great pressure on water, air and electricity resources.

1.2 Political situation

China's 12th Five Year Plan (2011-2015) forms the basis of the Government's current economic and social development efforts. In continuity with the 11th Five Year Plan, the 12th Plan aims to sustain the rapid and steady development of China's 'socialist market economy', while aiming to achieve three key targets:

- Rebalance the economy: The Government's commitment to transforming the country's previous GDP-oriented development model into a more balanced model that seeks to address a whole range of increasingly important concerns. The targets of the new model include economic growth, structural adjustment, social services development, carbon mitigation and environmental protection, as well as transparency and governance reforms.
- Reduce social inequality: Policies to reduce the gap between urban and rural areas include increasing social safety nets, closing the income gap through minimum wage hikes, encouraging employment, building public housing, and increasing coverage of basic and medical insurance, as well as continuing to develop the western regions through preferential policies.

[1] Government of China. http://www.gov.cn/
[2] Statistical Communique of the People's Republic of China on the 2010 National Economic and Social Development. National Bureau of Statistics of China
[3] Population Reference Bureau
[4] Statistical Communique of the People's Republic of China on the 2010 National Economic and Social Development. National Bureau of Statistics of China

housing, and increasing coverage of basic and medical insurance, as well as continuing to develop the western regions through preferential policies.

- Protect the environment: Policies include reducing pollution, increasing energy efficiency and ensuring a stable, reliable and clean energy supply through a range of energy-efficient conservation, utilization and development strategies, as well as setting up tougher targets for environment protection by increasing the number of major pollutants from three to five.

The 12th Five Year Plan includes a series of quantitative targets, such as controlling total population increase below 1.39 billion, increasing life expectancy by one year to 74.5 years on average, constructing 36 million new housing units, increasing both rural and urban income steadily, reducing energy intensity and carbon emissions, decreasing water consumption and improving the efficient use of water.

The 12th Plan focuses on strengthening the implementation of health care reform. It also includes a number of strategic priorities and major tasks, including: deepening reforms and opening up further to the outside world; constructing a 'new socialist countryside'; promoting more balanced development among the different regions; establishing a basic public service system; and increasing capacity for science and technology innovation.

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. During 1979-1984, economic growth was driven by the labour shift from agriculture to rural industry. Between 1985 and 1992, growth benefited from the improved efficiency in capital allocation stemming from price liberalization and opening up to foreign trade. Further opening up of the economy to foreign direct investment in the 1990s stimulated technological progress. China's economy has been growing at an average rate of nearly 10% annually for the past 10 years, and the Government hopes to raise gross domestic product (GDP) from approximately US$ 1 trillion in 2000 [1] to 7.5 trillion by 2015[2].

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 1196 Yuan (US$ 87) decreased from 250 million in 1978 (31% of the rural population) to 14.79 million in 2007 (1.6% of the rural population). The Government is targeting a reduction in poverty and ensuring basic living standards for the general population by 2020.[3]

In March 2009, as a result of the global economic downturn in late 2008, the Government put forward an economic stimulus package of 4 trillion Yuan (US$ 585 billion) for 2010-2011, for 10 key sectors. Of that total, 1.2 trillion Yuan was from the Central Government, and the remainder from local governments, state-owned enterprises or the private sector. Some 63% of the total has been dedicated to infrastructure (public and post-quake reconstruction). In addition to the stimulus package, the Central Government invested 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. As a result of the large stimulus packet, combined with policies that encouraged consumption, China's economy grew by 8.7% in 2009. Per capita GDP in 2009 was US$ 3677.0[4].

1.4 Risks, vulnerabilities and hazards

The Government is focused on maintaining employment and economic growth, and public health policies may be considered less important than encouraging consumption. Emerging health threats related to the environment, workplace and lifestyle are becoming more evident. Air pollution and water contamination by industrial and

[1] China Statistical Yearbook 2010. National Bureau of Statistics of China. http://www.stats.gov.cn/tjsj/ndsj/2010/indexeh.htm
[2] China 12th Five Year Plan
[3] The State Council Leading Group Office of Poverty Alleviation and Development www.gov.cn
[4] China Statistical Yearbook 2010. National Bureau of Statistics of China. http://www.stats.gov.cn/tjsj/ndsj/2010/indexeh.htm

municipal waste, as well as overuse of chemical fertilizers and pesticides, annually cost China over 400 000 lives.[1] The 12th Five-Year Plan also includes many ambitious environmental and energy efficiency targets that would make an important contribution to protecting the environment.

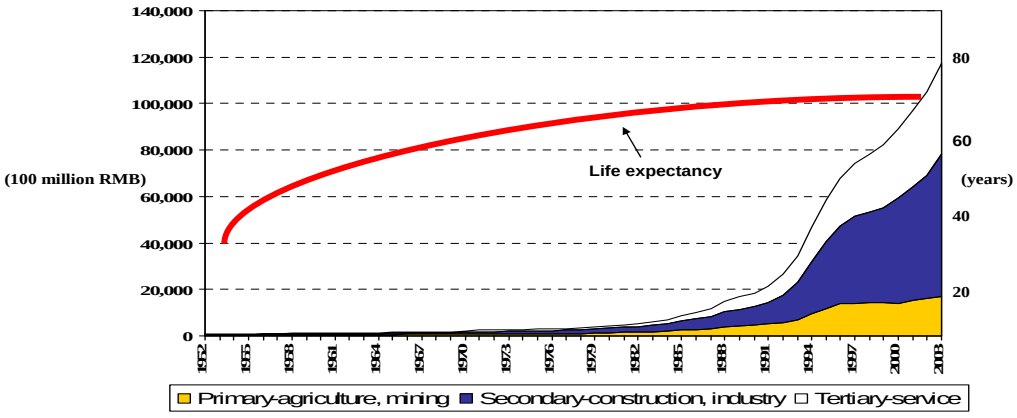
The benefits of growth have, however, not been shared equally across geographic regions, rich and poor households, urban and rural residents, and migrant and resident populations within cities. The major health threats in underdeveloped areas of rural China include unsafe water, lack of sanitation, undernutrition, vitamin and mineral deficiencies, and indoor pollution. Many people, especially in the remote and resource-poor areas in the western and interior regions, still have consumption levels below a dollar a day, often without access to clean water, arable land, or adequate health and educational services. Efforts to move from a fee-for-service to a prepaid system with a comprehensive benefits package are underway. However, ill-health continues to be a contributor to poverty, and out-of-pocket medical expenses remain high.

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 2 shows the increase in life expectancy over almost 50 years in comparison with economic growth. Other health indicators improved as well. By 2009, the maternal mortality ratio (MMR) had declined to 38 per 100 000 live births, and the infant and under-five mortality rates to 17 and 19 per 1000 live births, respectively. The prevalence of underweight children under five years of age decreased to 4.5% in 2000-2009[2]. Coverage of measles-containing vaccine 2nd dose (MCV2) was 99.4% in 2010.[3] A critical health challenge relates to inequality in health outcomes. Life expectancy is also generally lower in rural provinces and among those with higher poverty rates.

Figure 2. 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 138 per 100 000 people in 2009[4]. WHO estimates that each year there are approximately 1 million new cases, of which 500 000 are infectious, smear-positive pulmonary disease.[5] Multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB) are becoming critical public health threats. Based on a 2007 national baseline survey on drug-resistant tuberculosis, 5.7% of new cases (95% CI: 4.6-7.1) and 25.6% of previously treated cases (95% CI: 21.7-30.0); 0.68% (CI: 04-1.1) had XDR-TB. In addition, it

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 WHO World Health Statistics 2011
3 WHO Regional Office for the Western Pacific, data received from technical units
4 China :health profile, World Health Organization. http://www.who.int/en/
5 *Global tuberculosis control, A short update to the 2009 report.* Geneva, World Health Organization, 2009.

has been estimated that there are approximately 84 000 new cases of MDR-TB per year.[1] In April 2009, the Government hosted a high-level meeting on MDR/XDR-TB, and initiated WHO Resolution WHA 62.15 on prevention and control of multidrug-resistant tuberculosis and extensively drug-resistant tuberculosis, urging all Member States to achieve universal access to diagnosis and treatment of MDR-TB and XDR-TB.

Although HIV prevalence in adults is currently low (0.06%)[2], 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, Sichuan, Guangxi, Xinjiang and Guangdong provinces are the worst affected, with over 33 000 HIV infections reported in 2009. Sexual transmission is now the main mode of transmission. Among those living with HIV reported in 2009, 44.9% of infections were through heterosexual transmission, 10.2% through homosexual transmission, and 27% via injecting drug use.[3]

Emerging disease threats are important because of their epidemic potential, and recent epidemics that originated in China, such as severe acute respiratory disease syndrome (SARS) and highly pathogenic avian influenza A (H5N1), as well as and pandemic influenza A (H1N1), have caused social instability and considerable financial and economic loss. New emerging and re-emerging vectorbome diseases have also provoked outbreaks and raised concerns in China, including a Chikunggunya-virus-related disease that appeared for the first time in 2006, and severe fever with thrombocytopenia syndrome (SFTS) caused by a novel bunyavirus discovered in 2009 in the country. Hand, foot and mouth disease (HFMD), mainly caused by enterovirus 71, also generated in China, has resulted in annual epidemics in the country since 2000 (~1.8 million clinically diagnosed cases and 905 deaths in 2010).

While China remains vulnerable to the health threats posed by emerging and re-emerging infectious diseases, known and preventable diseases, such as malaria, cholera and schistosomiasis, 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. Malaria has been identified in 20 of the 31 provinces, municipalities and autonomous regions. However, in 2010, most reported cases were located in Anhui, Hainan and Yunnan provinces. Of those, indigenous transmission by *Plasmodium Falciparum* was only reported in Yunnan and Hainan. China reported 14 491 laboratory-confirmed malaria cases and 12 deaths, in 2009 and 5188 cases and 19 deaths in 2010.

2.3 Leading causes of mortality and morbidity

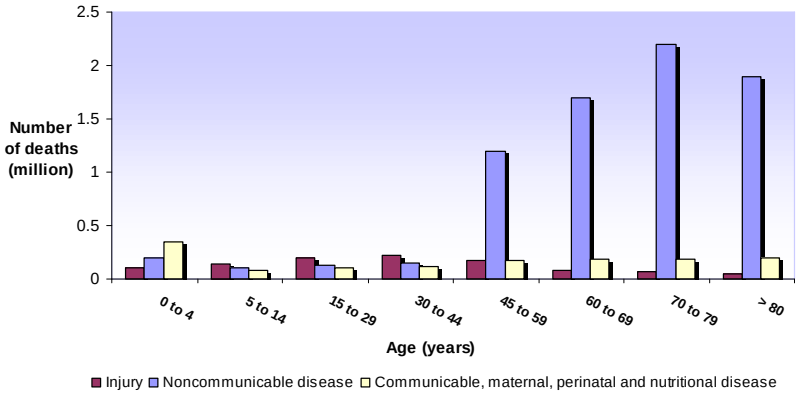
According to the survey conducted in 2003, a decline in infectious diseases was seen between 1998 and 2008, while noncommunicable disease conditions rose continually over the same period. The disease profile resembles that of a developed country, with some 80% of total deaths due to noncommunicable diseases and injuries. Figure 3 shows causes of death, by age, in 2003. Among the remaining infectious diseases, hepatitis B, tuberculosis and lower respiratory infections still account for significant mortality and lost disability-adjusted life years (DALYs).

[1] *M/XDR-TB surveillance and response: 2010 global update(draft).* Geneva, World Health Organization, *2010*

[2] 2010 UNGASS. This figure includes mainly VCT sites established in CDC system or inside Hospital.

[3] *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, 2009.

Figure 3. Number of deaths, by cause and age, 2003



Source: WHO World Health Report (2005)

In 2008, the leading causes of morbidity were diseases of the circulatory system; diseases of the respiratory system; diseases of the digestive system; diseases related to pregnancy, childbirth and postpartum complications; injuries and poisonings; cerebrovascular diseases; diseases of the genito-urinary system; hypertension; malignant neoplasms; and musculoskeletal conditions. The major causes of death in 2009 were: malignant neoplasms; heart diseases; cerebrovascular diseases; diseases of the respiratory system; injuries and poisonings; endocrine, nutritional and metabolic diseases; diseases of the digestive system; diseases of the genito-urinary system; diseases of the nervous system; and mental disorders.

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. The goal of measles elimination by 2012 has been adopted by the Government. Currently the Expanded Programme on Immunization also includes hepatitis B vaccine, with coverage of 92.2% for timely hep B birth-dose delivery in 2010[1]. The Government recently expanded the immunization programme to include vaccines to prevent a total of 12 diseases (TB, poliomyelitis, diphtheria, tetanus, pertussis, measles, hepatitis B, Japanese encephalitis, meningococcal meningitis, hepatitis A, rubella and mumps) in all children, as well vaccines to prevent leptospirosis, anthrax and epidemic haemorrhagic fever in selected populations. Vaccines now exist that can help to prevent pneumonia and diarrhoea; the Government will be considering whether and how to introduce these vaccines in the future. The 11th Five Year Plan stipulated that immunization coverage should reach more than 90% by 2010. The Plan also set 2010 targets for infant mortality (17 per 1000 live births) and the maternal mortality ratio (40 per 100 000 live births). All of those targets have been achieved. The 12th Five-Year Plan sets 2015 targets for infant mortality (12 per 1000 live births) and the maternal mortality ratio (22 per 100 000 live births).

China has been remarkably successful in achieving its maternal and child health goals, exceeding national targets. While regional disparities exist, since the mid-1980s, the infant and under-five mortality rates in the country as a whole have continued to fall.[2] National statistics show that the MMR decreased from 80 to 38 per 100 000 live births between 1996 and 2009[3] and reductions also occurred in the infant mortality rate (IMR) and the under-five mortality rate (U5MR) to 17 and 19 per 1000 live births, respectively, in 2009[4]. Like other health indicators, the MMR, IMR and U5MR are higher in western China compared with coastal areas. Girls continue to be disadvantaged.

[1] China :health profile, World Health Organization. http://www.who.int/en/
[2] *Chinese health statistical digest 2006, 2007, 2008, 2009*, and online statistics Ministry of Health, http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohwsbwstjxxzx/s8208/201004/46556.htm
[3] National Maternal and Child Health Surveillance System
[4] *World health statistics 2011*. Geneva, World Health Organization, 2011.

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. The share of deaths made up by NCD increased from 53% to 85% during the period of 1973 to 2009. According to the findings of the Third National Death Survey, the top four causes of death were cerebrovascular diseases, cancer, respiratory system diseases and heart diseases, and the mortality rate for NCD has reached 503/100 000. Cerebrovascular diseases, malignant neoplasms and heart diseases account for more than 50% of all deaths.[1] The rankings based on disability-adjusted life years (DALYs)[2] 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 the quality of air, water and sanitation; reductions in tobacco and alcohol use; improvements in diet and nutrition; and increases in 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. In addition to the longstanding challenges of curtailing infectious disease, this double burden of disease places enormous strains on the resource-deficient health system.[3]

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, including sepsis, pneumonia, diarrhoea, measles and tetanus, many of which could be addressed through high quality health care. 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 disabilities and 80% of deaths among adults and older people are due to NCD, which account for two out of three deaths each year. Four-fifths of these deaths are in low-income and middle-income counties, and one-third are in people younger than 60 years.[4]

Among the remaining infectious diseases, hepatitis B, tuberculosis 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 accidents (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 as 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]

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Health Care Reform Leading Group was established in 2006. It is currently composed of 20 ministries and chaired by Vice Premier Li Keqiang of the State Council, with the Ministers of Health and the National Development and Reform Commission (NDRC) as Vice-Chairs.

After three years of deliberation, in 2009, the Chinese Government announced its national health reform plan. The main objective is to provide universal health care coverage by 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 cooperative medical

[1] Chinese health statistics digest 2010 and online statistics Ministry of Health.
http://www.moh.gov.cn/publicfiles//business/htmlfiles/zwgkzt/ptjty/digest2010/index.html
[2] 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.
[3] Priority actions for NCD.www.thelancet.com.Published online April 6,2011
[4] *Mortality and burden of disease estimates for WHO Member States in 2004*.Geneva,World Health Organization,2009.
[5] *Turning the tide: injury and violence prevention in China*. Beijing, World Health Organization, 2006.
[6] *National Project on Mental Health (2002-2010)*. Beijing, China Department for Disease Control and Prevention, Ministry of Health, 2002.

services, 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.

In 2009, the Government committed to spending 850 billion Yuan (US$ 124 billion) on fulfilling the three-year plan (est 0.8% annual increase in [2008] GDP), 39% from Central Government, although the total investment has increased to 1134.2 billion Yuan (US$ 177.8 billion) and the government investment to 365.9 billion Yuan (US$ 57.4 billion) . The Central Government allocation to implementing health reform in 2009 amounted 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 . In 2010, 126.8 billion Yuan (US$ 19.9 billion) was allocated to implement the health reform.

After two years of implementation, the Government has announced a series of achievements by end of 2010, including:

- The new rural cooperative medical system: 96% of the rural population (836 million people) covered by health insurance[1].
- The pharmaceutical system: about 86% of government-run primary-level health care facilities adopting the essential medicines list.
- The public health system: 30 million children aged below 15 receiving free hepatitis B vaccine, 8.85 million rural women subsidized for hospital delivery, 473 thousand million rural women screened for breast cancer, 4.89 million rural women screened for cervical carcinoma.[24]
- Primary-level health care: 32 700 township health centres, 37 800 urban community health centres and 648 400 village clinics built. [23,2]
- The public hospital reforms pilot: 16 national-level and 31 provincial-level pilot cities have carried out public hospital reforms; and nearly 100 hospitals in 22 provinces have launched an electronic medical record (EMR) pilot test.[24]

There are many targets for 2011. They include[3]: maintaining 90% or higher health insurance coverage for both urban and rural areas; increasing to 200 Yuan the per person government subsidy to urban residents' basic medical insurance and new rural coooperative health insurance; and rebuilding 300 county hospitals, 1000 township health centres and 13000 community health stations.

3.2 Organization of health services and delivery systems

Since 2003, dramatic increases in insurance coverage have been accompanied by increased service utilization, particularly in rural areas. Between 2003 and 2011, national insurance coverage increased from 23.1% to 90%. [31,4] By the end of 2010, the participation rate for the rural cooperative medical system had reached 96%.[5]

Changes in health financing have also led to changes in utilization patterns. Increasing rates of Caesarean section, particularly in urban areas, and frequent use of injections and infusions in primary care settings illustrate the unnecessary use of certain treatment measures. Cesarean section rates have increased overall from 16.3% to 26.8%, and urban rates were 50.9% in 2008. An assessment of 121 471 prescriptions for patients diagnosed with a noncommunicable condition in 218 primary care facilities was conducted as part of the National Health Services Survey (NHSS) 2008.[6] In village clinics and township health centres, 66% and 61% of patients were prescribed antibiotics, respectively. Intramuscular and intravenous injection rates were also very high at 30% and 35% of rural prescriptions, respectively, and 13% and 32% of urban prescriptions, respectively. These high figures correspond to other smaller-scale studies conducted in China. Such treatment patterns are striking given the prevalance of noncommunicable disease treatment.

While health insurance coverage is increasing, especially in rural areas, many people are underinsured and continue to face high out-of-pocket costs, with such costs accounting for 41.1% of total health expenditure until 2009.[30]

[1] Chinese health enterprise development situation statistics bulletin, 2010. Center for Health Statistics and Information, Ministry of Health.
[2] Health statistics abstract, 2011. Center for Health Statistics and Information, Ministry of Health.
[3] The annual main work schedule in the five key areas of health system reform, 2011. General Office of the State Council.
[4] *National Health Services Survey 2003 and 2008*. Center for Health Statistics and Information, Ministry of Health.
[5] The Minister of Health routine press conference, 2011.6.10 http://www1.china.com.cn/info////2011-06/10/content_22753659.htm
[6] Center for Health Statistics and Information, Ministry of Health.

Households continue to face financial barriers in accessing health care, and household health expenditures remain high: 17.4% of patients failed to be hospitalized after referral for financial reasons in 2008, a decline from 21.8% in 2003. An increase was seen in the percentage of households with catastrophic expenses (5.0% to 5.6%), although fewer households became impoverished because of medical care (6.1% to 4.8%) between 2003 and 2008.

Employee health insurance, medical insurance for urban residents and rural cooperative medical and hospitalization cost insurance have increased their reimbursement levels to approximately 75%, 60% and 70% respectively.[34,1] Benefits are not portable across regions, however, which is a concern for migrant populations and migrant workers. In 2009, one estimate suggested that 48.7% of migrant populations were participating in health insurance[2]. However, issues remain in identifying migrant populations and accurately measuring their numbers and movements.

While major progress has been observed in expansion of rural insurance schemes and in some indicators of service use and expenditures, gaps remain between the poorest and better-off and, for some indicators, between eastern, central and western China. National Health Services Survey data show the need for policies to promote equitable access and risk protection, particularly for the urban and rural poor. The current health reform investments should be monitored closely to determine their impact on trends in service utilization, health-seeking behaviour, quality of care, risk protection and, ultimately, health.

Since expenditure on medicines remains an important component of out-of-pocket expenditure, increasing the availability and affordability of generic essential medicines is an important policy. The Government is in the process of outlining reforms to improve access to quality, safe essential medicines, modifying the pricing system and strengthening medicine production and distribution systems.

3.3 Health policy, planning and regulatory framework

A major component of the health reforms 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 relating 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. Deficiencies in clinical quality have resulted from financial incentives in the delivery system, combined with difficulties in: posting qualified human resources to peripheral facilities, gaining suffiient government resource allocation, and the supervision and regulatory systems for the delivery systems. Safety standards and health regulations, as well as their enforcement, could be strengthened, particularly in rural areas. With the implementation of the health reform in 2009, the Ministry of Health established the National Center for Health Quality Management and Control, which aims to designate and guide regional centres in strengthening health quality management. Performance evaluation also focuses on quality evaluation, as a main part of public hospital reform.

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 2009, the State Administration of Traditional Chinese Medicine (SATCM) implemented TCM Hospital Management Year actions in order to highlight the special advantage of TCM, strengthen its management in terms of quality and safety, and improve quality, safety and efficiency. In 2010, 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; establishing well-known TCM hospitals and departments; promoting a culture of TCM; and strengthening international cooperation and communication on TCM.[3] In addition, the Ministry of Health intends to promote TCM legislation and standardization, as well as innovation in the field, in 2011[31].

[1] The opinion of State Council on deepening the reform of medical and health system, 2011. State Council. http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohbgt/s6717/201104/51214.htm
[2] Wu ZH,Chen DY.The review of floating population social security situation in China. *Theory Journa*l,2011(1):65-70.
[3] Report by Minister Chen Zhu at the Annual Health Conference, 2010.

However, a number of challenges to further development of TCM remain. There is a lack of unified, systematic regulations to assess the safety and efficacy and ensure the quality of TCM products. In addition, there are no national TCM standards or guidelines for TCM clinical trials, and 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.

3.4 Health care financing

Total health expenditures rose from 3% of GDP in 1978 to 4.6% of GDP, or US$ 168.7 per person in 2009. Of that total, the Government contributed 50.3% and private expenditure 41.1%.[1] The contribution from public financing has increased and the proportion coming from personal health spending has fallen, leading to a reduction in the burden of difficulty associated with getting medical services and an increase in the satisfaction levels of both urban and rural residents.

Public resource allocation is highly decentralized.[2,3] 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] with township, county, prefecture and provincial governments administering 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. This provides an incentive to focus on more profitable curative care and medicines to generate larger profit margins.[5] 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 public health. The health reform plan aims to resolve the problem by increasing public spending on basic health services, as well as reducing the reliance on medicines and service sales to fund facility operating costs. The Government is committed to spending 25 Yuan (US$ 3.9) per person on a basic public health package[6]. Central government allocation of resources for the public health package varies according to local economic development capacity.

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: in 2009, 75.7% of health professionals had only technical secondary school diplomas and only 24.3% had bachelor degrees or above.[7] In addition, qualified staff are not well distributed across the country.[8] As in many other countries, poor and rural areas have not been able to attract and retain qualified medical staff. 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.

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). Supporting China's achievement of the MDGs provides an important organizational framework for donor coordination in the country, and the majority of

1 National health accounts: country information. Geneva, World Health Organization. Accessed in August 2011 from http://www.who.int/nha/country/en/index.html

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 The Minister of Health special press conference,2011.5.24
http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohbgt/s3582/201105/51785.htm

7 China health statistics yearbook 2010.

8 Wu XL, Rao KQ. An analysis of health resource development in China since 1980. *China health economics*, 2001,11:38-41.

donors have reflected this in their country assistance plans. China is ahead of schedule in achieving most of its 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 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.

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 United Nations resolution on public health, 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

In April 2009, the Government announced its blueprint for health system reform and development for the next decade in an official policy document entitled *Guidelines for Deepening Health Systems Reform*. The aim of the reform is to establish universal coverage (UC) that provides "safe, effective, convenient, and affordable basic health services" to all urban and rural residents.

China has made a promising start in its efforts to construct a universal health care system. However, attempts to achieve universal coverage in such a vast and diversified country are bound to face challenges. It is not easy to realize UC in a short period because of the big gaps in health care coverage between regions, urban and rural areas, and population groups. The following specific challenges need to be taken into consideration[1]:

- China is a big country characterized by varied levels of economic and health development. Determinants of health and health care often lie outside the health sector. Efforts to reduce disparities need to be made by all relevant sectors.
- Despite the fact that the Central Government supports the development of a people-centred ideology in governance, local governments are still focused on economic development. As a result, health and health care are not always at the top of the political agenda in many areas of the country. This may lead to proposed health reform policies and actions not being sufficiently and effectively implemented.
- China is still poor in terms of its average per capita resources. UC requires increased investment from both the Government and individuals. Health care services delivered by the UC system cannot exceed the availability of resources. Thus the Government is faced with the perennial problem of how to mobilize and sustain resources for the health care system.
- UC in China emphasizes the provision of primary and cost-effective health care mainly supported by public funding. This involves a shift in the allocation of health resources from tertiary hospitals to community health systems and from expensive pharmaceuticals to generic drugs. Such reallocation may be resisted by some strong stakeholders.

[1] Meng Q, Tang S. *Universal coverage of health care in China: challenges and opportunities*. Geneva, World Health Organization, 2010 (World Health Report (2010) Background paper 7).

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : China's 12th Five-Year Plan
Web address : http://www.china.org.cn

Title 2 : *2007 NPC & CPPCC Sessions*
Features : 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

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

Title 8 : China's Progress Towards the Millennium Development Goals 2008 Report
Operator : Ministry of Foreign Affairs of the People's Republic of China and United Nations System in China

5. ADDRESSES

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