In 2009, China launched an ambitious healthcare reform plan that has already resulted in health insurance coverage for nearly 95 percent of its citizens.¹ The reforms also include efforts to reduce costs while improving quality of care, but progress toward meeting these important goals has been hindered by inefficiency, waste, and corruption. The healthcare system in China has made remarkable strides in recent years, but the world’s most populous nation needs to fully address the contentious incentives in its healthcare model and governance of its public hospitals before it can achieve its goal of creating a healthy and harmonious society.

When the Communists came to power in 1949, they nationalized the healthcare system and set out to improve the health of the nation’s population by putting their scarce resources toward improving hygiene, reducing rates of infectious diseases, and providing access to basic primary care. Minimally trained “barefoot doctors,” who generally had a junior high school education plus six months of medical training, provided immunizations and treatment with low-cost antibiotics that were manufactured in China. These drugs didn’t match Western standards for purity, but their efficacy was sufficient to reduce mortality from common illnesses such as pneumonia. By the mid-1970s, nearly two million barefoot doctors provided first-level care as well as education on basic hygiene to more than 90 percent of China’s villages.²

Second-level care was provided in rural community and township health centers, while third-level care was provided in government-owned county and city hospitals. Healthcare in rural areas was financed by taxes on agricultural communes and work brigades, while the government set up insurance programs for officials and state employees.

Although China’s investment in healthcare was modest, the results were dramatic: The infant mortality rate dropped from 250 in 1,000 births in 1949 to 38 in 1,000 in 1984, while life expectancy increased from 35 years to 67 years during this period.²

Erosion and Crisis

The gains in health that China experienced began to erode rapidly in 1978, however, when the marketization of the Chinese economy eliminated agricultural communes and the primary source of financing for China’s rural healthcare system. The responsibility for financing healthcare depended on provincial and local governments, with wide disparities in funding capability between richer urban areas and poorer rural areas resulting in similar disparities.

Text: William Hsiao, K.T. Li Professor of Economics at Harvard University School of Public Health
Illustration: Orlando Hoetzel
State-of-the-art Healthcare

前沿医保
in cost, quality, and availability of healthcare. By 2003, only half of the urban population had health insurance, while 90 percent of the rural population had none.1 Catastrophic healthcare expenses were pushing people into poverty. In 1998, for example, my colleagues and I found that out-of-pocket healthcare spending in China increased the number of rural citizens living in poverty by 44 percent.4

In an effort to keep healthcare costs low, the government permitted providers to charge only modest fees for their services. To make up for the below-cost reimbursement they received for services, however, healthcare providers were allowed to earn up to 15 percent mark-up on the drugs they dispensed. The government later allowed providers to earn a similar profit on diagnostic tests such as ultrasounds and CT scans, with the goal of encouraging them to offer advanced technology care. The unintended consequences of this incentive system are painfully evident today in China, where healthcare providers routinely enrich themselves at the expense of their patients by over-prescribing drugs and conducting unnecessary expensive diagnostic tests. A 2009 study, for example, found that 79 percent of hospital patients in China were prescribed antibiotics, compared to an international average of just 30 percent.5

Another study that used a panel of physicians to review the treatments given to appendicitis and pneumonia patients found that 20 percent of expenditures were considered unnecessary.6

By early 2000, China’s economy had been growing at an average annual rate of 10 percent for two decades and was lifting millions out of poverty.2 The nation’s healthcare system, on the other hand, was clearly not serving the needs of patients. Widespread public discontent with the healthcare system was reflected in opinion polls and in increasingly common and dramatic protests in which relatives of ailing family members who could not afford admission into a hospital would carry them to their local government’s headquarters and shout, “Treat him!”

The 2002 outbreak of severe acute respiratory syndrome (SARS), which infected more than 7,000 people in China and killed nearly 650, exposed the weaknesses of the nation’s healthcare system and finally spurred the government to action.7

A New Era for Healthcare

In addition to allocating more money for prevention and to the Chinese Center for Disease Control and Prevention in the wake of the SARS outbreak, the central government established two new insurance programs to increase access to care.

In 2003, China introduced the New Cooperative Medical Scheme (NCMS), a voluntary insurance program for the nation’s 850 million rural residents. The program operates at the county level and is funded mostly by government subsidies and some by enrollee contributions. The government also launched a program for the poor known as the Medical Safety Net in 2003 and, in 2007, launched the Urban Resident Basic Medical Insurance Scheme for residents not covered by other insurance programs. As with NCMS, premiums

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He has assisted Taiwan, Cyprus, Mexico, Colombia, China, Sweden, and other nations in their health systems reforms and helped Vermont create its plan to become the first state in the USA to adopt a single-payer health system.

With the support of UNICEF, Hsiao collaborated with eleven universities in China to conduct a nationwide study on healthcare financing and provision for 100 million poor Chinese. With the support of the Gates Foundation, he has launched a large-scale social experiment to develop innovative rural healthcare models involving more than 100 communities and 1.6 million people in rural China.

Hsiao was as an actuary for a private insurer and later served as Deputy Chief Actuary for the U.S. Social Security Administration before leaving government service to enter the graduate program at Harvard University, where he earned a Master of Public Administration, and PhD in Economics. Hsiao joined the faculty of the Harvard School of Public Health in 1974.

He is a member of the U.S. National Academy of Sciences and is an honorary professor at Beijing and Fudan Universities in recognition of his work to improve healthcare in China.
Total Expenditure on Health as % of GDP (2010): 5.1%

Total Expenditure on Health per Capita in (2010): US$221

Government Expenditure on Health as % of Total Expenditure on Health (2010): 53.6%

Total Expenditure on Health as % of GDP (2010): 5.1%

Number of Nurses and Midwives per 10,000 Resident Population (2009):

Number of Physicians per 10,000 Resident Population (2009): 14.5

Male Life Expectancy at Birth (2009): 72

Female Life Expectancy at Birth (2009): 76


Number of Hospital Beds per 10,000 Resident Population (2009): 42

Female Life Expectancy at Birth (2009): 13.8

Male Life Expectancy at Birth (2009):

Sources: WHO Global Health Observatory Data Repository, WHO World Health Statistics 2012
Facts and Figures on the Chinese Healthcare System

China has substantially increased its investment in healthcare in recent years, and several health indicators have improved accordingly. Between 2000 and 2010, for example, total life expectancy jumped from 71.4 to 73.5. The maternal mortality rate per 100,000 live births was reduced from 26.1 in 2011, down from 36.6 just five years earlier. The reduction in maternal mortality rate per 100,000 live births was not only the result of improved healthcare infrastructure, but also of increased healthcare workers per 1,000 population, which are doctors, and 2.2 million of whom are nurses. Village doctors and other minimally trained professionals make up the bulk of the nation’s healthcare work force, however. China has 4.6 healthcare workers per 1,000 population, with the ratio of registered doctors and nurses being 1.5 and 1.7 per 1,000 population, respectively.

In 2009, China committed to increasing its annual government spending on healthcare by 850 billion Chinese yuan (about 125 billion U.S. dollars, or 105 billion euro) in the ensuing three years. As of 2011, nearly 70 percent of the population had insurance coverage.

China also has invested substantially in its healthcare infrastructure in recent years. In 2011, there were more than 954,000 healthcare institutions, including hospitals and public health centers such as the Chinese Center for Disease Control and Prevention. China had nearly 22,000 hospitals in 2011, an increase of 26.1 percent from 2011, down from 36.6 just five years earlier. The reduction in maternal mortality rate per 100,000 live births was not only the result of improved healthcare infrastructure, but also of increased healthcare workers per 1,000 population, which are doctors, and 2.2 million of whom are nurses. Village doctors and other minimally trained professionals make up the bulk of the nation’s healthcare work force, however. China has 4.6 healthcare workers per 1,000 population, with the ratio of registered doctors and nurses being 1.5 and 1.7 per 1,000 population, respectively.

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Westernization of Diseases

Although maternal deaths and those associated with poor sanitation have decreased, chronic diseases associated with the Western diet and lifestyle are rising rapidly. Non-communicable chronic diseases are the leading cause of death in China and account for more than 80 percent of the 10 million deaths caused by all diseases annually. The four leading non-communicable diseases in China are cardiovascular diseases, diabetes, cancer, and chronic obstructive pulmonary diseases. The World Bank notes that more than half of the non-communicable disease burden is preventable by modifying risk factors such as tobacco use, excessive alcohol consumption, poor diet, and physical inactivity. Unfortunately, data suggest that the number of cases of cardiovascular diseases, chronic obstructive pulmonary diseases, diabetes, and lung cancer in China will double or even triple over the next two decades unless effective prevention and control strategies are implemented. China also has one of the highest rates of mental illness in the world, with 17.5 percent of the population reporting some form of mental illness, and must do more to recognize and address the seriousness of this problem.

References:

5. China committed to increasing its annual government spending on healthcare by 850 billion Chinese yuan (about 125 billion U.S. dollars, or 105 billion euro) in the ensuing three years. In addition to increasing spending, the reform package sought to reduce health expenditure by improving efficiency and quality.
6. One of the main planks of the reform was expanding coverage to more than 90 percent of the population. China made the strategic decision to cover as many people as possible with shallow benefits and to expand the depth of coverage as more funding became available. As of 2011, nearly 95 percent of China’s citizens had insurance coverage.
7. To rein in costs associated with irrational drug use, the government eliminated the 15 percent drug mark-up for rural providers and set up an essential medicines list based on factors such as affordability, safety, and clinical efficacy. Primary providers can prescribe only the drugs that are on the list, which contains more than 300 generic medications, approximately one-third of which are Chinese herbal preparations. Procurement of the drugs is centralized on a provincial level, and the central government sets price ceilings that control costs.
Another component of the reform is to improve primary care and public health, particularly in rural areas. The government now pays rural providers a generous capitation for public health that has boosted provider incomes enough to make practicing in rural areas more appealing. The government also offers tuition waivers to medical students who agree to practice in rural township clinics for at least three years following graduation. Primary care providers are also intended to act as gatekeepers who manage referrals to more costly specialist and hospital care.

Challenges Ahead

Perhaps the most challenging of China’s goals is the reform of its public hospitals, which deliver more than 90 percent of the country’s inpatient and outpatient services. Several ministries are responsible for the governance and oversight of hospitals, an inefficient arrangement that can result in conflicting demands. Two ministries control insurance payments, for example, but prices are set by a different commission. Oversight of hospital administrators is the responsibility of the Ministry of Health, but the directors are appointed by a party organization department. Civil service rules set by the Ministry of Personnel give job guarantees to physicians and other personnel, regardless of how well they perform their duties.

China has designated 16 cities to test various public hospital reforms. Some have relaxed civil service rules so that personnel are employed on limited-term contracts, with reappointment or promotion based on performance. Others have established new commissions to coordinate the numerous organizations that finance and regulate their public hospitals. Others have sold their hospitals to private investors or turned over their management to hospital employees. The results from these experiments have the potential to significantly reshape China’s hospitals in the coming years.

China’s healthcare reforms are undeniably ambitious, but some daunting challenges remain. The expansion of insurance has increased the use of healthcare, but it does not appear to have measurably reduced the financial risks associated with high out-of-pocket costs. One study conducted in China’s western region found that the rural insurance program actually increased catastrophic healthcare costs – defined as more than 20 percent of annual income – among households.

Increasing access to health insurance is an important goal, but costs are likely to continue to burden patients and their families until the incentive structures and governance for providers are reformed. When physician bonuses are tied to hospital profits, as they commonly are in China, the fee-for-service payment system encourages expensive diagnostic testing and overtreatment. Although township health centers and other rural providers are prohibited from earning a profit on prescription drugs, urban hospitals, whose administrators are politically powerful and well connected, are currently exempted from this rule and still have incentive to overprescribe costly drugs.

Perhaps most importantly, healthcare providers and administrators in China need to abandon the culture of corruption that has reduced patient trust while increasing costs, and prompted patients to physically assault physicians. Fortunately, China’s central government is well aware of these challenges and strives to introduce new reforms for a healthcare system that can achieve harmony between the needs of patients and healthcare providers.

“Costs are likely to continue to burden patients and their families until the incentive structures and governance for providers are reformed.”

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