

Correcting Past Health Policy Mistakes

William C. Hsiao

Abstract: China's health policy in the 1980s followed its economic policy of marketization. China shifted health financing from public to private and commercialized the country's public health services. Unwittingly, the Chinese government did not grasp the serious market failures in health care, which resulted in a profit-driven public health service in which patients pay directly for services. China's health policy created three major unintended consequences: disparity between rural and urban residents, poor quality of health care, and rapid inflation in health expenditures. Since 2003, China has tried to correct its policy mistakes through public financing and by establishing social health insurance. However, strong profit motives have become embedded within the culture of medical professionals and have eroded the professional ethics that prioritize medical practices for patients' benefits. Restoring medical ethics is a formidable challenge. This paper analyzes the transformation of the Chinese health system and its ongoing challenges.

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Alongside the shiny marble-walled shopping centers, lined with Gucci, Louis Vuitton, and Prada stores, and nestled among soaring glass skyscrapers, glittering modern hospitals now dot all major Chinese cities. These state-of-the-art facilities, full of expensive high-technology chromatic machines and white-coated staff, stand in stark contrast to the mud-brick, single-room health stations found in the Chinese countryside. Although more and more of China's 1.3 billion people are moving to metropolises, the majority of its rural population, which still numbers some seven hundred million, remains in desperate need of well-trained village doctors and basic essential drugs. The disparity in access to quality health care between rural and urban areas has in essence created a two-tiered system. Although the top level is similar to health care available in first-world nations, the lower tier of the Chinese health care system is more typical of that found in the third world.

After a century of being derided as the "sick man of Asia," China has now become the second largest economy in the world. As explained in Barry Naughton's essay in this volume, the economic

reforms that began in 1978 have transformed the economic and social landscape.¹ As a result, per capita average GDP rose from \$300 to \$5,450, and six hundred million Chinese were lifted out of extreme poverty.² Compared to the historical economic development of England, China collapsed about two hundred years of development into a thirty-year period.³

Until a decade ago, China's leaders favored the cities in terms of policy and investment, leaving the rural areas to languish. Meanwhile, the Chinese *hukou* system (household registration) has restricted the migration of people from one area to another, particularly rural residents wanting to move to urban areas on a permanent basis. The economic boom did transform some rural areas to cities, converting about four hundred million rural residents to urban; but that number includes three hundred million so-called migrant workers who work in big industrial centers in Shanghai, Shenzhen, and Guangzhou.⁴ And when rural residents become migrant workers in cities, they are often prohibited from bringing their families, and they have no rights to urban social services such as education, housing, health insurance, and social welfare support. The result of these changes has been huge and growing disparities in the well-being of urban and rural residents, including migrant workers. The average disposable income per person for urban residents is 3.5 times that of rural residents,⁵ and the Gini coefficient, which measures the inequality of income distribution, has doubled from 0.21 in the 1980s to 0.47 in 2012.⁶ As Martin Whyte discusses in his essay in this issue, China now seems to consist of two separate societies: urban and rural.⁷ And the disparity between the two has caused increasing social strife.⁸

Beyond economic growth, one of the most startling aspects of China's rapid development over the past thirty years

has been the transformation of its health care system. The country's previous socialistic health care system largely imploded, in part because China adopted a market strategy, relying on private sources to finance health care and commercialize the provision of health services. Ironically, bastions of free-market capitalism such as the United States and Singapore long ago learned that the marketization of health care – with its severe market failures – would create havoc and yield profound inequities in health. Nonetheless, in 1980, China adopted a market approach to health care, following the general policy of the economic sector.

The reliance on private sources to finance health care and commercialize health care delivery has left behind three deep and enduring wounds for current and future Chinese leaders to address. First, private financing resulted in disparities in access to quality health care, leading to health status differences between urban and rural residents. China has worked to address this issue during the past decade by increasing public financing for the poor, establishing universal health insurance, and investing in health facilities in poor areas. However, China has not been able to close the gap to any significant degree. More important, effective health care relies on well-trained, qualified practitioners, and China has not been able to close the gap in human resources between cities and the countryside, nor between poor and rich provinces.

Second, the free market strategy encouraged hospitals and physicians to pursue profits with distorted prices. Profit-driven medicine has become the norm, resulting in poor quality of health care, incorrect diagnoses, inappropriate treatments, and perhaps even the delivery of harmful health care. As a result, patients have lost respect for and trust in physicians and other health professionals; there

have even been cases of patients and their families resorting to violence, physically assaulting physicians when they did not recover from their illnesses.⁹

Lastly, profit-driven medicine has created deeply embedded waste and corruption in Chinese medical practices, leading to high inflation in health expenditures. While China's economy grew at a phenomenal rate, health expenditures grew even faster, due in part to the profit-seeking behavior of hospitals and physicians. This rapid increase raises the critical question of whether China's current health care system is sustainable when a rapidly growing share of government and household budgets is being diverted to health without commensurate benefits to patients.

The Chinese government has conducted in-depth investigations (including by engaging international organizations and scholars), gathered extensive evidence, and analyzed the major health problems outlined above. Top officials, as well as the general public, have a comprehensive and accurate understanding of the issues, and the causes have been largely identified. However, some of these causes are rooted in the unethical behavior of health professionals, as well as in government structure, both of which are difficult to correct.

After the Chinese Communist Party (CCP) took control of China in 1949, it created a health care system typical of Communist countries. The government owned, funded, and ran all hospitals: from large specialized hospitals in urban areas to small township hospitals in the countryside. The private practice of medicine and the private ownership of health facilities disappeared; physicians became employees of the state. In rural areas, the cornerstone of the health care system was the commune, the critical institution in rural life. Communes oversaw economic

production and provided social services, including health care, which was provided through the Cooperative Medical System (CMS). The CMS operated health posts in villages and township health centers that were staffed mostly by so-called barefoot doctors. *William C. Hsiao*

From 1952 to 1982, the Chinese health care system made enormous improvements in health and health care by emphasizing prevention and primary care provided by modestly trained practitioners. Infant mortality fell from 200 to 34 per 1,000 live births, and life expectancy increased from about 35 to 68 years. The Chinese public health apparatus also achieved major gains in controlling infectious disease through immunization, improved sanitation, and the control of disease vectors, such as mosquitoes for malaria and snails for schistosomiasis.¹⁰

When China embarked on its economic reform in 1978, it overhauled four major health policies: it shifted public financing to private sources; it turned public hospitals and clinics into commercial enterprises; it decentralized its health system; and it altered the price structure for public facilities, thereby enabling them to earn profits.

As China's centrally planned socialist economy was transformed to a market economy centered on private enterprise, the Chinese government experienced a drastic reduction in revenue and had to completely rebuild its fiscal system. Consequently, the government lacked the revenue to fund social programs such as health care. Like other transition economies, the Chinese government's revenue as a percentage of GDP fell from 30 percent to 10 percent, and subsidies for public health facilities fell from 50 to 60 percent to a mere 10 percent of the facilities' total revenues by the early 1990s.¹¹ The government therefore decided to replace public financing with private sources: public health facilities would charge patients

directly for services and patients would pay out of pocket. On the one hand, the existing health insurance program for employed workers was reformed and maintained, largely protecting health care for urban workers in the formal economy. On the other hand, in its efforts to privatize the agricultural economy, the government completely dismantled the communes, thereby destroying the health care safety net for most rural Chinese. Without the CMS, Chinese peasants had no way to pool risks for health care expenses, and nine hundred million rural, mostly poor citizens became, in effect, uninsured overnight. Consequently, the once-vaunted barefoot doctors were forced to become private health practitioners.

The second policy change was for public health clinics and hospitals to rely on payments from patients as their main source of income. Virtually unregulated, this policy basically turned public facilities into free commercial enterprises. As public funding declined, public facilities relied more and more on the sale of services in private markets to cover their expenses. De facto public hospitals and clinics came to function much like for-profit commercial entities, focusing primarily on their bottom lines, with Chinese policy informally sanctioning their actions.¹² Clinics and hospitals quickly found that selling drugs and conducting tests were the most lucrative ways to stay afloat, pay bonuses to staff, and generate funds for expansion. Thus, the number of drug sales and test orders exploded.

The third policy change decentralized the public health system in order to reduce central governmental expenditures. While rich provinces had adequate financial resources to cover the costs of the public health services, the poor provinces did not, resulting in significant disparities between provinces and counties. Furthermore, the central government granted

local public health agencies the authority to charge for certain services, such as inspections of hotels and restaurants for sanitary conditions and industrial enterprises for environmental compliance. Health agencies could also establish fee-for-service health centers and hospitals for delivering curative services. Predictably, local public health authorities concentrated on these revenue-generating activities, neglecting preventive programs such as health education, maternal and child health, and epidemic control.

The last major change was the introduction of a new pricing policy for health services, stemming from the Chinese government's desire for prices to be affordable to patients, yet sufficiently high for public facilities to survive and flourish. But the newly established pricing policy was at its core irrational and reflected a lack of adequate understanding of economic theory and international best practices. That unsound pricing policy set in motion significant changes in the organizational culture, motivation, and behavior of hospital leaders and practitioners. The government set prices below costs for personal services such as a physician visit or hospital daily bed charges, but set prices above costs for new and high-tech diagnostic services. It also allowed a 15 percent profit margin on drugs. This system created perverse incentives for providers, who had to cover 90 percent of their budgets with revenue-generating activities.¹³ Over time, public hospitals, clinics, and village doctors gradually became profit-seeking entities, while the healing of ill patients took a back seat. Equally important, the government's pricing policy created a leveraging effect whereby a provider had to dispense \$7 in drugs to earn \$1 in profit. Subsequently, providers overprescribed drugs and tests, and hospitals raced to introduce high-tech services and expensive imported drugs that

returned higher profit margins. These medical practices not only caused rapid health expenditure inflation, but also harmed patients with unnecessary surgeries and hospitalizations, adverse reactions from the overuse of drugs, drug toxicity from the use of multiple drugs, and false-positives from poorly executed tests.

The unfortunate consequences of this combination of policy changes are best understood from three perspectives: disparities between rural and urban areas, deficient quality of health care, and burgeoning health expenditure inflation. Urban/rural disparities in financial and physical access to medical care, and public health expenditures are reflected in the available health statistics.

In China's privatized, market-based health care system, the wealth of consumers is a critical determinant of both their access to services and the quality of services they receive. With urban incomes triple those in rural areas, urban residents have fared far better than rural residents in terms of health services. In 1999, infant mortality was 38 per 1,000 live births in rural areas, compared to 12 per 1,000 in urban areas. In 2002, mortality among children under age 5 was 39.6 per 1,000 in rural areas, but only 14.6 per 1,000 in urban locales. Maternal mortality figures in 2002 were 58.2 and 22.3 per 100,000, respectively.¹⁴

One indicator of the reduced quality of health care in China is the inappropriate use of prescription drugs, a problem closely linked with medical practitioners and hospitals having become profit-driven entities. In China, 75 percent of patients suffering from a common cold are prescribed antibiotics – more than twice the international average of 30 percent.¹⁵ Unfortunately, no authority has been held accountable for these practices. Compounding the problem is collusion between providers and the pharmaceutical

sector: hospitals and physicians receive kickbacks from drug companies for prescribing their products, and doctors' bonuses are often tied to these kickbacks. In rural areas, village doctors buy expired and counterfeit drugs at low cost and sell them as valid products at higher prices. Some investigators estimate that until two years ago, one-third of drugs dispensed in rural areas were actually counterfeit, earning huge profits for their vendors.

China's rapidly rising health expenditure inflation rate is one broad consequence of the country's health policies. Chinese health expenditures have burgeoned over the past thirty years, albeit from a low base. From 1978 to 2011, personal health spending per capita in China increased by a multiple of 164, from 11 RMB to 1,801 RMB (roughly \$6 to \$280). At the same time, the Consumer Price Index increased nearly sixfold. National health care spending rose from 3 percent to 5.15 percent of GDP. A huge portion of this expenditure was for unnecessary drugs and high-tech tests; half of Chinese health care spending is devoted to drugs, compared to only 10 percent in the United States.¹⁶

By the mid-1990s, the Chinese central government was well aware of the widespread problems created by its health policies, although top officials were reluctant to address them. In some rural districts, deficiencies in health care became a cause of growing anger toward the Chinese government and contributed to local riots and disturbances.¹⁷ In a country where threats to established political authority have historically sprung from the grievances of an impoverished peasantry, the consequences of rural/urban health care differentials carry profound political significance for the Chinese leadership.

China finally took action in 2003, when its rapidly growing economy yielded large

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tax revenues that gave the capacity for the central and some local governments to make substantial health care investments. The central government created the New Cooperative Medical Scheme (NCMS), a health insurance program for rural citizens. All provinces were compelled to establish NCMS by pooling risk at the county level. The provinces and counties must cofinance the majority of NCMS, though the central government does provide fiscal transfers to poor and middle-income provinces to fund a significant portion of the costs. NCMS began in 2003 with a total public subsidy of 20 RMB for each resident's health insurance premium; the subsidy has since grown to 300 RMB per resident. In 2007, the government created a similar insurance program for the 250 million urban residents who were not insured under the Employee Insurance Plan.¹⁸ These new insurance programs lowered financial barriers to medical care, and rural residents have since increased their use of health services.

But it was not until 2008 that the Chinese government publicly acknowledged and began to address the other huge health care problems it had created. In designing its reform, China carefully examined solutions pioneered in other countries and organized a wide consultation with domestic and international experts, as well as with the public. A systemic reform was launched in 2009 with the goal of providing affordable and equitable basic health care for all citizens by 2020. With this ambitious program, the Chinese government is affirming its role as the primary financing source for health care, while also giving priority to preventive and primary care. The reforms were anchored by five related measures: providing insurance coverage for more than 90 percent of the population, establishing a national essential drug system, establishing and funding effective prevention,

investing and upgrading primary care facilities and human resources, and piloting public hospital reforms.

As of the end of 2012, the Chinese government had invested an impressive additional \$125 billion in public health. Coverage is now remarkably broad, albeit still far from egalitarian. China currently has more than 95 percent of its population covered under its three social insurance programs. Although employed workers currently have a much richer benefits package, the goal is to equalize benefits within a decade.¹⁹ Preventive and primary care are better funded, supplied, and used, and many new public facilities have been built or renovated. Public health facilities are equipped with reasonable medical equipment, and essential drugs are available almost everywhere at a reasonable price.

Despite these significant advances, three major problems remain unsolved. The first is the need for reform of public hospitals, particularly high-level urban hospitals that absorb the majority of financial and human resources. These are the cradle of overtesting and overprescribing drugs, of waste, and of corruptive practices, such as demanding red envelopes (bribes) from patients and receiving kickbacks from pharmaceutical and medical device companies. The shortage of qualified human resources to serve the rural population and the resultant poor quality of health care in these regions constitute the remaining unsolved challenges.

China's recent health policy changes are intended to address the deep wounds that resulted from the country's earlier interrelated policies of privatization and commercialization of health care, as well as its irrational pricing policy. As noted, these earlier policies contributed to stark urban/rural health disparities, poor quality of health care, and health expenditure

inflation. One of the most critical issues surrounding Chinese health policy is its differential effect on the health status of various social and economic groups. China collects voluminous data, but much of it is not accessible for public use. Essentially, China only publishes national data related to distributional impact between urban and rural residents, as well as some information about variation among provinces. Data by income, education, and ethnicity are scarce. There are individual studies conducted by researchers for a given community or a city, but they are not representative of the nation as a whole.

The most common measures of health are infant mortality rate (IMR), maternal mortality rate (MMR), and life expectancy. Table 1 shows that IMR for rural residents is 260 percent that of urban residents; MMR for rural residents is 38 percent greater than that of urban residents; while urban life expectancy is 7 percent greater than that of rural residents. Children born into rural households suffer a much higher death rate than urban children, indicating the lack of basic health care in rural areas. The lower MMR in urban areas seems to indicate that urban China has a higher quality child delivery system. The smaller difference in life expectancy may reflect the less contaminated food supply and lower air pollution in rural areas, and the possibility that rural people lead a healthier lifestyle with more exercise than city dwellers.

Differences in health outcomes are caused by many factors: varied financial and human resources invested in preventive and health services; different income, education, environmental living conditions; varied occupational hazards and lifestyles; and different ethnic backgrounds and social classes. While we cannot find reliable national data on differences in health status by socioeconomic group, China does publish reliable aggregate

data on health differences between urban and rural residents. *William C. Hsiao*

The previous section discussed how the decentralization of China's fiscal system occurred in conjunction with its economic liberalization, resulting in provincial and county governments being made responsible for funding health care. However, most of the poor provinces in China's rural western region did not have the financial resources to fund even basic health care for their residents. Meanwhile, the people – mostly farmers – lacked the income to pay for health care services themselves. China does not publish reliable data on health spending over time by province. It does, however, publish data on total public and private per capita spending on health for urban and rural residents. This crude information does not adjust for differences in age/sex and varying disease patterns. Nevertheless, this is the only reliable and up-to-date national information we have to shed some light on the urban-rural disparity. Figure 1 shows the difference in per capita spending on health for urban and rural residents from 1990 to 2011. The latest data available show that in 2011, spending on health care for the average urban resident was more than three times the average amount spent on care for rural residents. Despite the 2008 NCMS initiative, the difference in health expenditure has hardly narrowed.

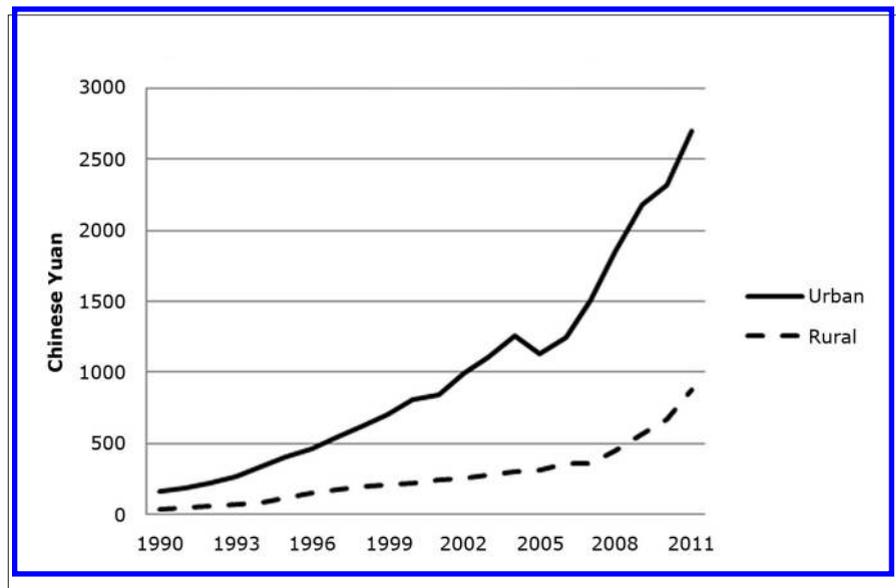
More substantial health insurance coverage for workers employed in the formal sector is a major reason why spending is so different between urban and rural residents. Table 2 shows the estimated average premium paid per covered person in 2011. The premium was estimated at 1,960 RMB under employee insurance, which covers civil servants and formal sector workers. More than 90 percent of these workers are urban residents. Meanwhile, the health insurance plan for rural resi-

Table 1
Comparison of Health Status between Rural and Urban Residents, 2006 – 2010

	National	Urban	Rural	Ratio (urban to rural)
IMR (per 1,000 live births)	14.86	6.84	17.96	1:2.62
MMR (per 10,000 births)	34.76	27.1	37.4	1:1.38
Life Expectancy	74.83	77.33	72.29	1.07:1

Source: IMR and MMR are calculated by averaging the five-year period; data are from National Bureau of Statistics of People’s Republic of China, *China Statistical Yearbook 2012* (Beijing: China Statistics Press, 2012). The national life expectancy is from the 2010 Census, and the rural and urban life expectancy are extrapolated using the existing data before the 2010 Census. See Ying Hu, “The Average Life Expectancy Analysis on China’s Current Population in Urban and Rural,” *Population & Development* 16 (2) (2010): 41 – 47.

Figure 1
Health Care Expenditure Per Capita, 1990 – 2011



Source: National Bureau of Statistics of People’s Republic of China, *China Statistical Yearbook 2012* (Beijing: China Statistics Press, 2012).

Table 2
Estimated Premium Per Capita in 2011

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	New Cooperative Medical Schemes (NCMS)	Employee Medical Insurance, including civil servants
Average Premium (RMB)	246	1,960

Source: National Bureau of Statistics of People's Republic of China, *China Statistical Yearbook 2012* (Beijing: China Statistics Press, 2012); average premium estimated by author.

dents, the NCMS, had an estimated average premium of 246 RMB per person, only one-eighth of the average premium for the employed workers. This vast difference reflects several factors, including the more generous benefits of employee insurance (most migrant workers are not eligible), the higher cost of health care in cities, and the higher average age of people covered under the employee insurance as compared to the NCMS. And when more generous benefits are available to employees, they demand more services and more expensive facilities, drugs, and tests.

Along with unequal financial inputs for urban and rural residents, human resource inputs also differ. Most comparisons using aggregate numbers of practitioners and hospital beds for each urban and rural resident lead to erroneous conclusions. The aggregate numbers show that urban and rural areas have similar numbers of beds and practitioners per resident. However, the competency of the practitioners varies wildly, as does the quality of the hospitals, both in terms of their medical capabilities and sophistication. In rural areas, basic preventive and routine health care is provided by village doctors, who become qualified by gradu-

ating from junior high school followed by an additional three years of education in a health school. At best, they have the knowledge, training, and competency of a nurse's assistant in a modern hospital. The older village doctors do not even have this level of formal training; they learned on the job.

Providing the next level of care are the physicians, mostly three-year medical school graduates, who staff the township health centers that serve between ten thousand and twenty-five thousand residents. The physicians who would be considered reasonably qualified by Western standards, with training comparable to five or more years of college-level medical education, practice mostly in cities. China certifies its hospitals into levels 1, 2, 2A, 3, and 3A. The beds in township health centers are classified as level 1, which means that they are mostly for observation or convalescence. Rural county hospitals serving populations of approximately three hundred thousand are designated as level 2. They typically offer five or more basic medical specialty services such as internal medicine, general surgery, obstetrics, pediatrics, and ear/nose/throat. County hospitals offer very few subspe-

cialties. In contrast, urban residents are mostly served by level 3 and 3A hospitals, which offer every known subspecialty and the highest level of care.

The clearest way to illustrate the difference in the capability and competency of health services in urban and rural regions is to compare the number of registered physicians (three or more years of medical school education) serving rural and urban residents. Figure 2 shows that urban areas, on average, have 2.2 times the number of registered physicians per one thousand residents as rural areas. This gap has widened over the past two decades.

It is perhaps understandable that highly educated physicians would not want to work in rural areas, due to less desirable socioeconomic conditions and reduced educational opportunities for their children. Many nations try to rely on trained nurses to substitute for physicians in rural areas, but nurses are also unequally distributed in China. Figure 3 compares the number of nurses per one thousand residents in urban and rural areas. In 2011, the most recent year of data, there were 3.4 times the number of nurses per one thousand residents in urban than in rural areas, also a gap that has widened over the past two decades. As a result, prevention and health services in rural China have deteriorated, triggering the central government's effort to mount a comprehensive reform ten years ago.

The quality of health care itself is closely related to health care accessibility and expenditure, and is a critical outcome of the policy reforms. Numerous studies prior to the 2008 reform documented the overprescription of drugs and overuse of intravenous (IV) therapy, both effects of the introduction of distorted prices and the commercialization of public hospitals and clinics in the mid-1980s. For example, one study estimated that approximately half of all antibiotic prescriptions in China

were medically unnecessary, and many of these prescriptions were implicated in more than one million children becoming deaf or suffering neurological disorders.²⁰ Such patterns also contribute to the global problem of antimicrobial resistance.

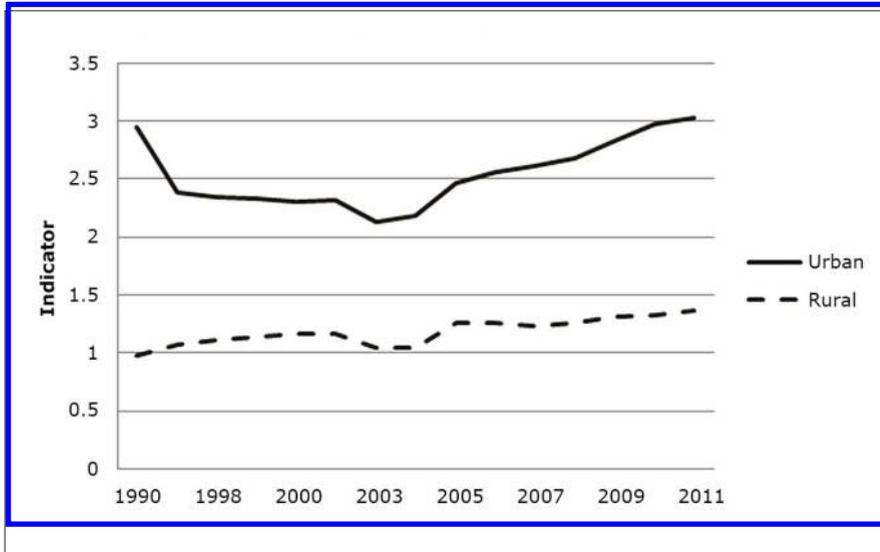
In a large study of urban health centers and stations, the authors randomly examined 203,080 outpatients' records retrospectively from the years 2007 to 2009.²¹ They found that prescriptions of antibiotics, simultaneous use of two or more antibiotics, administration of IV injections, and prescription of steroid hormones far exceeded the World Health Organization's (WHO) reference standards during this period. Prescriptions of multiple antibiotics and use of IV injections were at least twice the WHO standards. Overuse of steroid hormones can harm patients, and patients can suffer from side effects of antibiotics as well as toxicity resulting from the use of multiple drugs. Overuse of drugs can also cause patients long-term harm in the form of drug resistance. These findings are summarized in Table 3.

How does the quality of health care in rural communities compare to that found in cities? One study in the rural counties of Ningxia, a low-income province, found that 60 to 70 percent of drug prescriptions for the common cold and upper respiratory infections were inappropriate.²² Another study in the rural areas of Shandong province found similar results.²³ These studies suggest that rural areas suffer from more widespread inappropriate drug prescriptions than urban areas.

Another harmful effect of government policies on health care is illustrated by the discretionary surgery rate. Child delivery by Caesarean section (CS) is a profitable procedure in many countries, and thus can be used as a measure of overuse and quality of health care. China experienced a rapid increase in CS when insurance was expanded to cover this procedure at a price

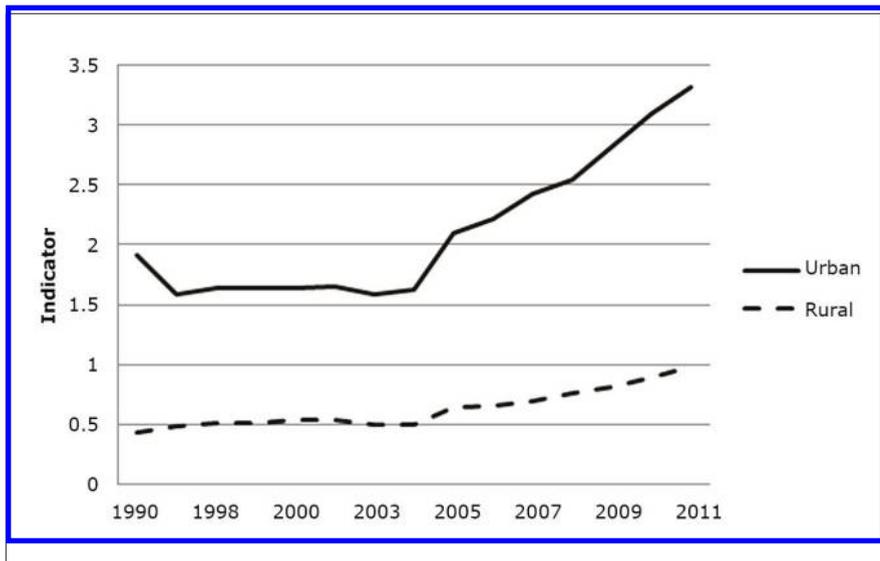
Figure 2
 Number of Registered Physicians per 1,000 Chinese Citizens, 1990 – 2011

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Source: Ministry of Health of People's Republic of China, *China's Health Statistics Yearbook 2012* (Beijing: Peking Union Medical College Press, 2012).

Figure 3
 Number of Nurses per 1,000 Chinese Citizens, 1990 – 2011



Source: Ministry of Health of People's Republic of China, *China's Health Statistics Yearbook 2012* (Beijing: Peking Union Medical College Press, 2012).

Correcting *Table 3*
 Past Health Policy Mistakes
 Comparing Chinese Practice with WHO Standards

Indicators	China's Health Centers	WHO Standard
Drugs prescribed per encounter	2.55 – 2.6	1.6 – 1.8
Percent of encounters with an antibiotic prescribed	40.1 – 45.1	20.0 – 26.8
Percent of encounters with an IV injection prescribed	32.4 – 35.4	13.4 – 24.1

Source: Yongbin Li, Jing Xu, Fang Wang, Bin Wang, et al., “Overprescribing in China, Driven by Financial Incentives, Results in Very High Use of Antibiotics, Injections, and Corticosteroids,” *Health Affairs* 31 (5) (2012): 1075 – 1082.

above the surgery’s actual cost. Studies found that China has a national average of 46 percent of births by CS, while the WHO standard is only 10 to 15 percent. In some areas of China, this figure exceeded 80 percent, and a few even reached 90 percent.²⁴

The 2008 Chinese health system reform does not seem to have improved the quality of health care because it did not alter the fee-for-service payment system, nor the distorted pricing. A large study of eighty-three counties and cities nationwide found only variable and small changes in the use of antibiotics, IV injections, and steroid hormones between 2007 and 2010.²⁵

More broadly, a health care system is not sustainable if increasingly larger shares of government and household budgets are being diverted to health care without commensurate benefits to patients. The annual health expenditure per person has been increasing at average rates of 10.85 percent (after adjusting for inflation) from 1990 through 2011: a figure that has outpaced the GDP average growth rate of 9.5

percent by 1.35 percent annually. The rate of increase has accelerated since 2007. During the period of 1990 to 2007, health expenditure was growing faster annually than GDP by 0.6 percent, but this gap jumped to 4.6 percent for the years between 2007 and 2011. This means that an ever-larger share of government and household expenditures has been going to health costs.

These rising inflation rates are chiefly caused by the previously discussed incentives given to commercialized public hospitals and clinics: fee-for-service payments and distorted prices. Facilities can increase their revenues and profits by inducing demand for services, in part by advising patients that they need unnecessary or excessive hospitalizations, surgeries, tests, and drugs. As profit motives took hold and gradually overwhelmed professional medical ethics, physicians and hospitals started exploiting patients as cash cows. Kickbacks from pharmaceutical and medical device companies created perverse incentives, further compounding the problem. When

China achieved nearly universal health insurance coverage in 2008, hospitals and practitioners faced a moral dilemma of whether to prescribe unnecessary but profitable drugs, tests, and services, given that insurance would pay a significant share of the bill. Based on the available evidence, we can conclude that China currently has an inefficient health care system, characterized by tremendous waste and generally poor quality.

While China has experienced remarkable growth in per capita GDP, growth in health expenditure per person has outpaced it: national health expenditure as a percent of GDP rose from 4 percent in 1990 to 5.2 percent in 2011. While this is a relatively high percentage compared to India's 3.9 percent, it is a relatively low percentage compared to upper-middle income nations such as Mexico (6.2 percent in 2011) and Brazil (8.9 percent). Chinese spending will continue to grow at a fast pace as its population ages.²⁶

With its 2008 health system reform, China affirmed that the government assumes primary responsibility for financing health care. This commitment, along with other new declarations, promises to reduce the serious disparities between health care in urban and rural communities. However, it may take more than a decade to effectively address the maldistribution of health professionals between the two demographics.

The challenge that China faces now is how to address the two fundamental drivers of poor quality health care and rapid health expenditure inflation rates. The causes are interrelated and reinforcing. The first is the disappearance of professional ethics in medical practices. Practicing medicine under a profit-driven, commercialized medical system for nearly three decades has eroded professional ethical constraint in clinical decision-

making. Unless China can reestablish the ethical practice of medicine that characterized a previous generation of medical practitioners, the quality of health care will remain seriously deficient and health expenditure inflation will not be curbed. But how can China reestablish ethical behavior for millions of medical practitioners, and how long would that take?

Today, most senior physicians in China receive handsome incomes from bonuses, red envelopes (bribes), and kickbacks, and they expect that their future income be at the same level or higher. If the government formalized this high level of compensation in the hope of disincentivizing corrupt practices, junior doctors, nurses, and other professional staff would demand comparable compensation. Government-subsidized social insurance plans and individual households could not afford to finance this increase in compensation. Moreover, higher salaries alone may not end the unprofessional practices of senior physicians or village doctors.

Establishing ethical guidelines that may go against the self-interest of medical practitioners is particularly difficult in present-day China, where the pursuit of personal material wealth is viewed as a widely accepted, if not glorious, social value. China's unfettered free market, with its crony capitalism and widespread corruption, is simply not conducive to the ethical practice of medicine, which may call upon physicians to sacrifice personal gains for patients' welfare.

China is also confronted by the challenge of governing the public hospitals that deliver 90 percent of hospital inpatient and outpatient services and absorb 60 percent of national health expenditures.²⁷ Under the current system, Chinese public hospitals do not transform money into efficacious services; and more investment in health may not improve health outcomes. Moreover, because oversight of

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China's public hospitals is divided between multiple governmental agencies, the actual governance of the hospitals is characterized by contradictory policies of various ministries. In total, at least eight ministries control some important part of a public hospital's operations. Each ministry has its own policies, which are not necessarily consistent or coordinated with those of other ministries. As a result, one agency may demand that physicians prioritize healing the patient, while another agency may provide a perverse incentive to do exactly the opposite. The Ministry of Health is responsible for the population's health, but does not control the essential inputs: financial resources, human resources, or capital investments. Four different ministries control financial inputs: the National Development and Reform Commission sets prices for health services and drugs and controls capital investments, the Commission on Personnel sets the number of staff that hospitals can employ, the CCP Organization Department appoints the director and other leaders of the hospital, and the Ministry of Personnel sets work and compensation regulations and controls staff appointments. Under these circumstances, public hospitals are uncertain of their functions and social responsibilities, and they are held accountable not for quality and appropriateness of services provided to patients, but only for profits or losses.

Reforming the governance structure of public hospitals will require a major restructuring of the power, function, authority, and accountability of many ministries. Such reform demands agreement among numerous bureaucratic stakeholders and powerful political leaders – a major challenge under the best of circumstances.

Both China and India have achieved enviable economic growth during the past decade, and a simple comparative analysis

of the two growing states can shed some light on Chinese accomplishments and pains in health care. About a decade ago, both governments turned their attention to health care with a focus on the poor, spending an additional 1 percent of their country's GDP on health services. A decade later, 95 percent of children in China and 43.5 percent of children in India are fully vaccinated; infant mortality rate is 17 per 1,000 live births in China, compared with 50 per 1,000 births in India; 98.7 percent of births in China and 40.8 percent in India are delivered in institutions; life expectancy at birth is 73.5 years in China and 65.5 years in India.²⁸ Both nations have been trying to provide universal health insurance with shallow benefits since 2003. Currently, about 95 percent of Chinese and 25 percent of Indian citizens have health insurance coverage.²⁹ Only one-half of the Indian poor eligible for free hospital insurance are actually covered today.³⁰

The difference in outcomes can partly be explained by the attention China gave to public health since the mid-1960s, as well as the different strategies adopted to improve health. The Chinese Communist government began prioritizing the provision of basic health care to peasants in the mid-1960s, long before the Indian government did. China also emphasized prevention and primary care delivered by modestly trained health workers. The Indian strategy (except in a few states such as Kerala) relied on public health services staffed by fully trained physicians and nurses, but due to inadequate public financing and poor governance, these public facilities could not meet the population's basic health needs. Lastly, China has an autocratic but effective government that can implement its policies efficaciously, while India's democratic government struggles to reach consensus and implement its policies.

Indian economist Amartya Sen has argued that economic growth and increased

GDP per capita may not necessarily reduce social inequalities.³¹ This is clearly evident in both China and India. Between their urban and rural residents, both nations are confronted by huge disparities in health status, health spending per capita, supply of facilities, qualified medical staff,

and access to quality health services. The policies that China implements to narrow these disparities will tell us about the social values that undergird the government's actions, as well as the Chinese political economy on social policy.

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ENDNOTES

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