



Goals and performance

Health systems exist ultimately to improve population health through the timely provision of appropriate health care. The care must, of course, also be affordable—in part because otherwise people will be deterred from seeking care, but also because the pursuit of health cannot be at any price. Good health is desirable, but has to be balanced against other important goals, such as better nutrition, shelter, education, and so on. Ideally, therefore, the cost of health care at the point of use will be low enough to enable households to restore their health *and* achieve some or all of these other goals—the so-called ‘financial protection’ goal of health systems.

This Briefing Note* argues that while in the 1960s and 1970s China performed well on both health system objectives, in the 1980s it faltered, and in the 1990s it slipped still further. China's increasingly weak performance is argued to reflect system-wide weaknesses in the health system. The cost of care has grown rapidly in recent years, deterring use of health services, and putting households who do use services at financial risk. The rise in the cost of care has coincided with falling health insurance coverage: health insurance has all but disappeared in rural areas, and is under a good deal of strain in urban areas. The way providers are paid encourages the provision of overly expensive care and discourages cost-consciousness. And the government is insufficiently engaged in areas where markets are known to perform badly.

* This briefing note was prepared by World Bank staff, and is based loosely on an issues note prepared by Magnus Lindelöw and Adam Wagstaff. The findings, interpretations, and conclusions expressed herein are those of the authors, and do not necessarily reflect the views of the World Bank or those of its Executive Directors or the governments they represent, or the Government of China. The note forms part of the World Bank's ongoing study on China's rural health sector. The study—referred to as the *China Rural Health AAA* (Analytical and Advisory Activities)—is being undertaken in collaboration with the Ministry of Health (MOH) and other government agencies, as well as with selected international partners. For further information, contact L. Richard Meyers (lmeyers@worldbank.org).

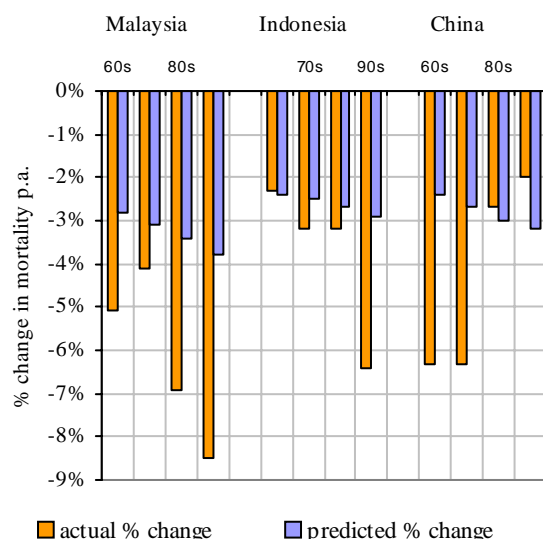
This Briefing Note is part of a broader series of Notes. It is intended to be an overview of the challenges facing the sector, and makes the case that reform is required. It does *not* make specific reform proposals, which will be the task of future Notes.

Historic and recent performance on health outcomes

Tracking health system performance in terms of health outcomes is hampered by a shortage of data that are comparable across countries and over time. Child mortality is one indicator that is widely available, and is widely accepted as a useful summary population health statistic.

In the 1960s and 1970s, China achieved annual reductions in under-five mortality in excess of 6%, well above the rates achieved by Indonesia and Malaysia, and well above the rates expected of a country with the per capita income China had at the time (Figure 1).

Figure 1: China's recent history on child mortality reduction in perspective



Source: UNICEF mortality data at www.childinfo.org.[†]

[†] The ‘predicted’ figures are based on a regression model, estimated on data across the entire world for the years 1960, 1970, 1980, 1990 and 2000. The model, which

In the 1980s and 1990s, the picture changed dramatically. While Indonesia and Malaysia achieved yet higher rates of reduction, China's rate fell. China also switched from being an over-performer (its rate of reduction in the 1960s and 1970s exceeded its expected rate), to being an under-performer. And while Indonesia and Malaysia exceeded expectations even more spectacularly in the 1990s than they had in the 1980s, China's performance—relative to expectations—deteriorated yet further.

These changing fortunes are reflected, as shown in another Briefing Note¹, in China's prospects on the Millennium Development Goals (MDGs). They are by no means bad, but they are not excellent either.

Why has China's performance been deteriorating in absolute terms and relative to expectations? The obvious hypothesis is that people who need health care are not getting it when they need it. The evidence on this is mixed. There is actually some encouraging evidence of *increased* utilization of some key interventions, including prenatal checkups and attended deliveries. But there is also evidence of people in China needing care and not receiving it. Of those interviewed in the 2003 National Health Survey (NHS), 50% (up from 36% in 1993) said they had been ill in the previous two weeks and yet had not sought care. In the 2003 survey, 30% of respondents said they had not been hospitalized despite having been told they needed to be. And among those who *did* go to hospital nearly half discharged themselves against their doctor's advice.

Cost—a growing barrier to getting health care

This level of non-use of health care by people who need it begs the question: Why? While many factors are undoubtedly important in shaping people's utilization decisions, one

includes per capita income and lagged mortality as covariates, confirms the importance of rising per capita incomes in reducing infant and child mortality, and the fact it becomes increasingly hard to reduce mortality as mortality falls. China's low death rates in 1990 made it harder for it to reduce its IMR and U5MR yet further. But working in China's favor was the rapid economic growth it achieved during the 1990s. The 'predicted' rates take both into account.

factor comes through as increasingly important—cost. Of those in the 2003 NHS who said they should have been hospitalized but weren't, the majority—fully three quarters in rural areas, and 85% among the poorest fifth of the population—said the reason was they couldn't afford it.

The cost of care in China is indeed high. In 2003, a single inpatient spell cost, on average, just under 4000 Yuan, equivalent to 43% of average income.* For someone in the poorest fifth of the population, 4000 Yuan is equivalent to nearly 200% of average income. The high cost of care would be less of a problem if Chinese households were protected by health insurance. But following the de-collectivization of agriculture, health insurance coverage plummeted (on which, more below). These high costs therefore have to be met out of pocket. It is not altogether unsurprising, therefore, that there are people in China who need care, but don't get it.

Getting sick, getting poor

Of course, there are also people in China who *do* seek treatment, but get into financial difficulty as a result. In the 2003 NHS, 30% of poor households said that health care costs were the reason they were in poverty. Urban households in China now spend *on average* over 7% of their total budget on health care. Household payments for health care are highest as a share of household spending among the poor.²

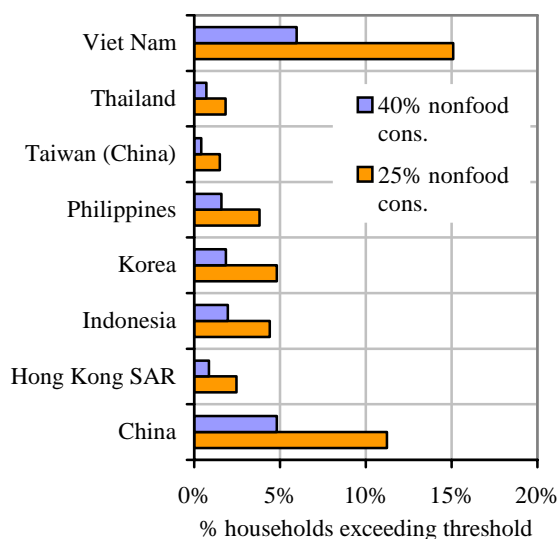
The high exposure to the risk of medical expenses gets reflected in the savings behavior of rural households in China. Research shows rural households hold more wealth, and hold more of it in liquid form than they would otherwise.³ This helps households to protect themselves against the financial consequences of health 'shocks'. But the evidence suggests that rural households in China (especially poor ones) are not able to completely 'smooth' their consumption when illness or some other factor causes an income 'shock'.⁴

* The data on the cost of an inpatient day comes from the MOH health yearbook. The data on income are from the National Bureau of Statistics (NBS).

So, as with its performance vis-à-vis the goal of improving health outcomes, China's health system vis-à-vis the goal of financial protection faces some challenges.

In fact, China may well face bigger challenges in this regard than other countries in the region, where household health spending—as a share of total spending—tends to be higher among *richer* income groups.⁵ Further, the fraction of the population experiencing 'catastrophic' health expenses (defined as expenses that are more than 25% or 40% of nonfood consumption) is higher in China than it is elsewhere in the region (Figure 2). And, in contrast to the situation elsewhere, those households in China that experience catastrophic payments are typically poor ones.⁶

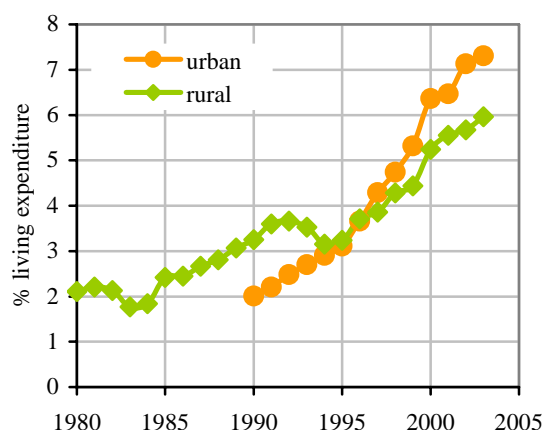
Figure 2: Chinese households are more likely to experience catastrophic health expenses than households in neighboring countries



Source: Van Doorslaer, O'Donnell, et al.⁶

China's performance on the financial protection goal may indeed have deteriorated over time. Household (i.e. private) health spending rose as a share of the household budget dramatically during the 1980s and 1990s, especially among urban households (Figure 3). In real terms, private spending grew at a staggering average annual rate of 20% during the 1990s. Public spending, by contrast, grew at a much more modest 8% per annum.

Figure 3: Out-of-pocket spending—an ever larger share of household expenditure



Source: China National Health Economics Institute "China National Health Accounts Digest", 2002.

Expanding and deepening health insurance

The high and rising cost of health care in China thus poses a major challenge to the health system—from the point of view of improving health, but also from the perspective of providing financial protection against health 'shocks'. Expanding health insurance is understandably seen as one of the obvious responses to this challenge.

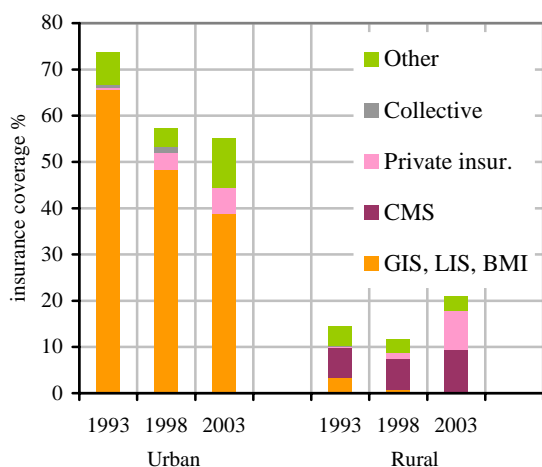
In urban areas, coverage in the government schemes—LIS and GIS, and more recently the new consolidated BMI scheme—steadily declined during the period 1993-2003, falling below 40% in 2003 (Figure 4) and 12% among the poorest fifth of the urban population.* In rural areas, coverage is far lower—below 20% in 2003. Coverage increased somewhat between 1998 and 2003, due to increased coverage in CMS and private (commercial) insurance schemes.

It is not just the *number* of people covered by health insurance that has been falling. The *depth* of coverage has also been declining (Figure 5). By 1997, insured patients were paying more than one third of their inpatient costs out of their own pockets. For outpatient costs, they were

* Figures taken from presentation made on 'Equity in health care among different income groups' by Tang Shenglan and Gao Jun at Dec. 2004 MOH seminar on 2003 NHS survey.

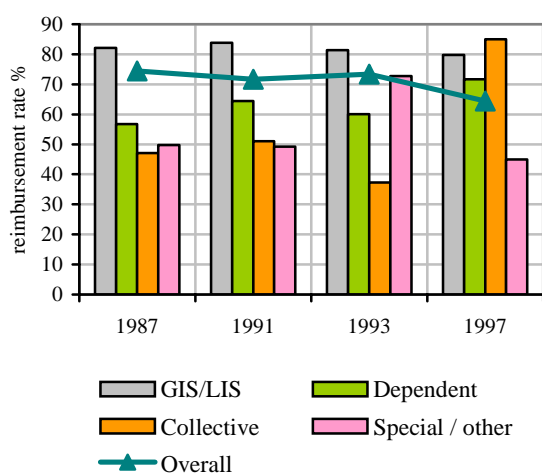
paying nearly *two thirds*, up from just 30% in 1987.⁷

Figure 4: Health insurance coverage in China has been falling



Source: National Health Survey^{2,*}

Figure 5: Reimbursement rates for inpatient care have also been falling



Source: China Health and Nutrition Survey^{†7}

The recent history of the urban schemes contains important lessons—not just for the future development of urban insurance but also for health insurance in rural areas too. One of these is the experience with cost-sharing

measures aimed at curbing insurance costs. One popular demand-side measure has been the Medical Savings Account (MSA), the idea being to give the patient an incentive to limit his demand for services. However, it is not clear how successful this approach can be in a system like China's where providers have strong financial incentives to generate demand for their services (see below).⁸ There is also a downside, namely that MSAs reduce financial protection—not only through higher co-payments, but also through the cap on payments from the social pooling account that has been introduced in many cities.

While important, the challenge of extending and deepening health insurance coverage in cities is small compared to China's huge challenge of providing coverage to the uninsured 80% of China's rural population, which accounts currently for 70% of the total population.

The current low coverage in rural areas stems from the collapse of the old commune-based cooperative medical scheme (CMS) following the decollectivization of agriculture. Attempts to resuscitate the CMS during the 1990s met with limited success. Schemes have tended to be less generous than the "old" CMS, and tend to suffer from poor administration and small risk pools. Further, their voluntary nature tends to result in adverse selection (the better risks opting out, leaving behind a risk pool that comprises ever worse risks).

With these experiences in mind, the government recently decided to develop a 'new-style' CMS (NCMS). The program is being piloted in more than 300 of China's more than 2000 counties, and will be rolled out to the rest of the country by 2010. Contributions from households—starting at 10 RMB per person, and paid on a voluntary basis—will be supplemented by a 10 RMB subsidy from local governments, and by a 10 RMB matching subsidy from central government in the case of households living the poorer central and western provinces. NCMS will operate at the county level rather than at the village or township level as was the case in the old CMS.

NCMS is a major policy shift by the government, and will doubtless make health care affordable to millions of rural households who currently do not get the care they need or do but end up impoverishing themselves in the

* Figures for urban 2003 are from 'Health Services Utilization and Urban Health Insurance Reform in China', presentation made by Ling Xu of MOH at Dec. 2004 MOH seminar on 2003 NHS survey. Figures for rural 2003 are from Main Findings from the 3rd NHS Survey, www.moh.gov.cn, accessed on April 21st, 2005.

† The CHNS sample is not statistically representative of the Chinese population but does cover a broad spectrum of China's provinces, and draws from the urban and rural populations.

process. As with all major policy initiatives, challenges are likely to be encountered as the policy is rolled out nationwide. Will NCMS be sustainable if kept on a voluntary basis, or will it increasingly suffer from adverse selection? Will a combined contribution of 30 RMB be sufficient? It looks rather small compared to the 104 RMB spent per capita on medical care in rural China in 2002. If 30 RMB *is* too small, and is not subsequently adjusted upwards, there are risks. NCMS administrators may promise too much to their members in terms of benefits, and end up making a loss. Or they may limit the scheme's benefits, so that NCMS members have to pay a substantial share of the cost of health care out of pocket.* Would households not be impoverished with such high copayments? If a total contribution of 30 RMB is indeed too little to make NCMS a fully fledged insurance scheme, how could additional revenues be generated, and done so in such a way that keeps NCMS affordable for the poor? How should central and local government subsidies be targeted if at all?

Improving provider performance

Expanding health insurance will undoubtedly help make care affordable—it will help ensure that people who need care get it, and are able to do so without impoverishing their families in the process.

But focusing on lack of health insurance as *the* obstacle to better health system performance begs the question of why health care costs are so high—and increasing so rapidly—in the first place. Things would be different if the high (and rising) cost of health care were justifiable. But it doesn't seem to be. Rather, it appears to reflect an increasing tendency of China's providers to induce demand for their services, especially high-tech care.

The health sector is one of the few sectors of the economy where users know far less about what services are appropriate for them than the person delivering the service. Health providers

* For example, even if benefits are limited to hospital costs, that would still leave 40% of expected medical costs uncovered. In fact, 30 RMB is sufficient to cover only around half of expected hospital costs, which would leave patients picking up the remaining 50% of their hospital bill.

have the scope to exploit this informational advantage, and may generate services that are not medically necessary. Whether they do so depends on the incentives they face.

Under the old planned economy of health care that existed in China up to 1980, providers had little financial incentive to generate demand for their services. They received a budget from the State or commune and that was the only legal payment they could receive.

However, when the planned economy model was discarded and replaced in the 1980s by the 'Management Responsibility System', provider incentives changed markedly. Under the new MRS system, rural health centers and hospitals were allocated a fixed subsidy and became free to generate additional revenues by charging patients. Furthermore, providers treating insured patients were reimbursed on a fee-for-service (FFS) basis. The prices paid by fee-paying patients and insurers were not set by providers themselves (one key element of a market system was therefore missing from the new model), but rather by a Price Commission. This tried to keep basic care affordable by setting the price of such care well below cost, and allowing providers to cross-subsidize such care by allowing them to earn profits on high-tech care. In addition, allowable drug prices were set above cost, and the allowable fees for insured patients were set above those for uninsured patients.

These policy changes, coupled with the information asymmetry between patient and provider, have resulted in many providers over-prescribing drugs because they make a profit on their sale, over-delivering sophisticated care on which they make a profit and under-delivering basic care on which they make a loss (see Box 1).⁹ The institution-level incentives have been sharpened by the use of individual-level incentives—the bonuses doctors receive from their hospital often depend on the revenues they generate through the provision of services and prescription of drugs. Overcharging has become increasingly prevalent: in a small scale study of hospitals in Shandong province, it was found that hospitals routinely overcharged by a margin of around 90% of the regulated fees, typically by “unbundling” services.¹⁰

Box 1: The legacies of China's provider payment system and pricing policies

In a recent study of village clinics, it was found that only 0.06% of drug prescriptions were considered reasonable.¹¹ Another study found that 20% of expenditures associated with the treatment of appendicitis and pneumonia were clinically unnecessary.¹²

In the case of TB, providers have delivered additional care to that in the free DOTS* package, because doing so generates additional revenues for them. In one setting, a local TB control manager explained that the DOTS strategy "has been locally adapted... to improve effectiveness and generate revenue".¹³ This involved treating patients for longer than the recommended six months, and providing non-standard tests and medicines on top of those in the DOTS package.

Many MCH centers now sell drugs and focus on maternity services for which they can charge, while EPS stations have begun offering outpatient care and have expanded revenue-generating activities such as sanitary inspections. These revenue-generating activities have displaced less profitable but more cost-effective activities, such as basic preventive and curative care, public health programs, outreach, and support and supervision.

Expanding health insurance—often seen as the obvious policy response to unaffordable care—could in fact exacerbate these problems. If providers continue to be paid by insurers on a FFS basis, the likelihood is that expansion of insurance coverage will simply result in providers inducing still more demand for their services, with patients perhaps paying similar amounts out-of-pocket as before, and providers pocketing the extra taxes injected into the system through insurance subsidies. Insurance reform without provider-payment reform would lead to disappointing results at best.

But how should providers be paid by insurers if not by FFS? Should insurers be free to decide? How should prices be set for fee-paying patients? By whom? And should providers be regulated differently if supplier-induced demand is to be cut? These are all key questions to be addressed in future Notes.

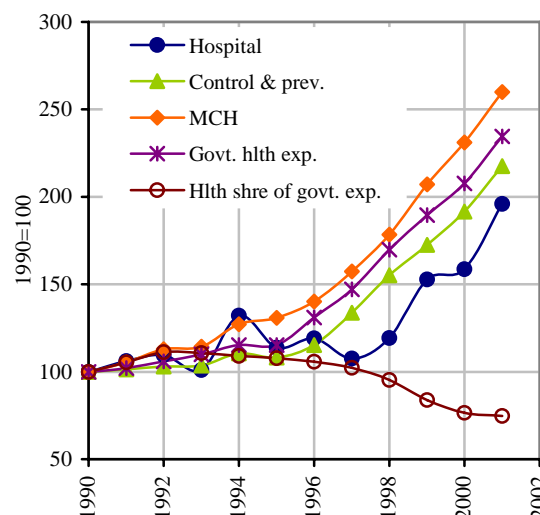
* DOTS stands for 'directly observed treatment strategy'.

Strengthening the role of government in China's health sector

What is the appropriate role for government in the health sector? Should government reduce its involvement in this sector and leave it to the free market?

Theory and evidence from around the world suggests that leaving the health care sector entirely to the market would not be wise. No country—not even the United States—does so. In some respects, in fact, the government in China should probably be doing more in the health sector. For example, it should probably be spending more, by, for example halting the decline in the share of government spending going to health (Figure 6). By international standards, a country with China's per capita income would be expected to spend around 2.4% of its GDP on government health spending. In the event, it spends just 1.9%.

Figure 6: Government health spending has risen in real terms, but has fallen as share of total government spending



Source: China National Health Economics Institute *China National Health Accounts Digest*, 2002.

Beyond spending more, what should China's government do differently in the health sector? Ultimately, government involvement in the health sector is to be rationalized in terms of the government trying to overcome 'market failures'—instances where a free market fails to deliver efficient and equitable outcomes. The current risk of adverse selection emerging as a

problem in voluntary insurance has already been mentioned, as have other challenges facing the government in the area of health insurance.

In the market for health care itself, there are also areas where the role of government merits examination.

All governments have an important role in setting and enforcing *regulations* to ensure that providers do not exploit their informational advantage over patients. The Chinese government has recently expressed concerns about this issue, and there is certainly scope to strengthen the regulation of providers in China. It is true of public providers, where quality control and the enforcement of price regulation are weak, but is especially true of private providers. Currently the weak framework for regulation (and enforcement) of private sector activity exposes patients to considerable risks of malpractice and unscrupulous providers. The price schedule is another area where, as already noted, reform may be merited.

Government engagement on *public health* is another area worth reviewing. All governments have an important role to play in financing—or at least subsidizing—services and activities that have either ‘externality’ characteristics such as immunization, or ‘public goods’ characteristics such as communicable disease surveillance and control. In China, public health activities are only partially financed by the government: for example, in a departure from international practice, Chinese families are charged for immunization.

China has, in fact, been increasing its spending on public health in real terms (Figure 6), contrary to what is often claimed. However, there is a concern that providers responded over-enthusiastically when they were given the freedom to raise their own revenues. And it is true that the government has increased its spending on health in general faster than on prevention and control activities, and that public health and family planning programs account for only 10-20% of non-insurance government spending.*

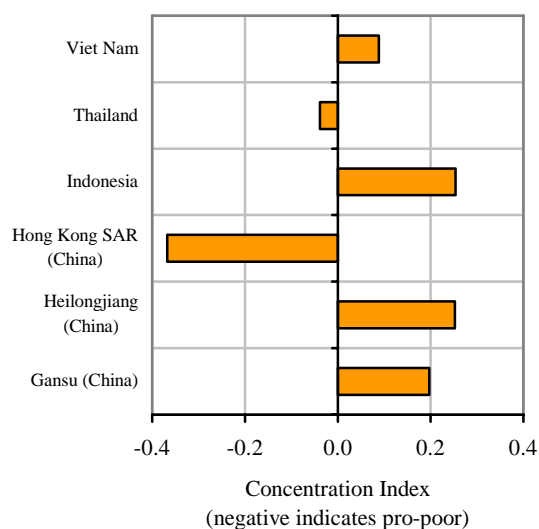
Should greater priority be given to core public health functions in China? Are the recent reforms and extra spending enough? Should the

* Source: China National Health Economics Institute China National Health Accounts Digest, 2002.

government rely for the delivery of public health services on providers who are allowed to generate incomes on top of any subsidies received? Or should public health activities be delivered by institutions that rely 100% on government subsidies? These are all important questions that need answers.

On the promotion of *equity* the government also faces challenges. Government spending currently disproportionately benefits the rich (Figure 7). This is likely to reflect a variety of factors. One is that because local governments are highly dependent on their own revenues, government spending per capita varies considerably across provinces—and even more so across counties. These inequalities have grown in recent years.¹⁴ Another factor is the large fraction of government health spending that goes to supporting the BMI.

Figure 7: Government spending on health in China disproportionately benefits the rich



Source: Van Doorslaer, O'Donnell, et al.¹⁵

There are signs that things are changing for the better, the government's commitment to transfer 10 RMB for every CMS enrollee in the poorer central and western provinces being a good example. Its commitment to improving equity is also evident in the Ministry of Civil Affairs' new medical assistance program.

Towards concrete reform proposals

On the two overarching goals of any health system—better population health and financial

protection—China's health care system faces major challenges.

On health outcomes China has gone from being an over-achiever to being an under-achiever. Many neighbors are doing better than China on progress towards the health MDGs. High health care costs are a major factor in people not getting the health care they need, and in causing poverty among those who do get care. Inadequate health insurance—low coverage and high copayments—is one clear area where work is required, and where reform efforts are already underway. But reform on the supply side is also urgently needed—the current emphasis on out-of-pocket payments and fee-for-service, coupled with the distorted price schedule, results in the provision of unnecessary care and rapidly rising costs. Expanding health insurance without addressing these supply-side issues makes little sense. Further, there is a case for the government increasing the quantity and quality of its engagement in the health sector. Government spending in China is less than one would expect by international standards of a country with China's GDP per capita, and as in many countries it disproportionately benefits the better off. Government spending on public health programs has increased in real terms, but more slowly than government health spending in general. The government could also undoubtedly achieve more with existing spending: for example, improving its regulatory framework vis-à-vis health care providers.

It is one thing to point out the need for reform. It is another to set out concrete options for reform. Several subsequent Briefing Notes in this series will make a start on this process by providing critical reviews of what is already known in the academic and policy literature. The next Note, for example, looks at the evidence available on how to improve provider performance. These Notes will in turn inform the deliberations of a joint Government of China-World Bank working group, whose task is to come up with concrete ideas for policy reform in each of the areas discussed in this Note.

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