



# CHINA'S HEALTHCARE SYSTEM AND REFORM

Edited by  
Lawton Robert Burns and Gordon G. Liu



## China's Healthcare System and Reform

This volume provides a comprehensive review of China's healthcare system and policy reforms in the context of the global economy. Following a value-chain framework, the 16 chapters cover the payers, the providers, and the producers (manufacturers) in China's system. It also provides a detailed analysis of the historical development of China's healthcare system, the current state of its broad reforms, and the uneasy balance between China's market-driven approach and governmental regulation. Most importantly, it devotes considerable attention to the major problems confronting China, including chronic illness, public health, and long-term care and economic security for the elderly. Burns and Liu have assembled the latest research from leading health economists and political scientists, as well as senior public health officials and corporate executives, making this book an essential read for industry professionals, policy-makers, researchers, and students studying comparative health systems across the world.

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# China's Healthcare Reform

## *Status and Outlook*

CLAUDIA SÜSSMUTH-DYCKERHOFF AND FLORIAN THEN

### Introduction

China's healthcare system is undergoing a major reform, one of the most complex and far-reaching efforts ever undertaken by any public health system in the world. It is designed to tackle a number of issues, including substantial inconsistencies in healthcare provision, the burden of chronic diseases, and rising costs.

This chapter provides an overview of China's healthcare context, the reforms that the government has put in place at national, provincial, and city levels, and the outlook for the next stages of reform. It is intended to inform discussion on future choices and actions taken by government, healthcare leaders and professionals, and private sector players.

The reforms are rooted in the specific context for healthcare in the country. First, China's healthcare services vary considerably between rural and urban areas, between one city and another, and even within one city. Second, the country faces a major challenge from chronic diseases: for instance, diabetes affects 11.6 percent of the population compared with the US rate of 9.3 percent. One in four Chinese has high blood pressure. China also accounts for a third of the world's smokers.<sup>1</sup> Third, healthcare costs are rising, out-of-pocket expenditures still account for 34 percent of all healthcare spending, and inequalities in income mean that advanced medical treatment and drugs are still out of reach for many people.

Healthcare reform deliberations conducted between 2005 and 2009 drew on internal input from the Ministry of Health (which has since evolved into today's National Health and Family Planning Commission, or NHFPC) along with external input from Peking University and Fudan University, the State Council's Development

Research Center, the World Bank, and the World Health Organization. In 2009, the government announced a new system. The overall objective of the reform was defined as providing every Chinese citizen with access to healthcare at an affordable cost by establishing a basic universal system of safe, effective, convenient, and low-cost services – with full rollout by 2020. To achieve this objective, the government set five priorities:

1. *Medical insurance*: Expand basic medical insurance programs
2. *Drug supply security*: Establish a national system for essential drugs
3. *Medical service provision*: Develop a primary healthcare service
4. *Public health service*: Provide equal access to urban and rural dwellers
5. *Operating environment*: Accelerate reform of public hospitals

Figure 5.1 shows the key milestones of the reform and the progress achieved to date.

While formulated at a high level by the central government, the implementation of healthcare has been, and still is, carried out at provincial or city levels. This approach allows provinces the flexibility to tailor healthcare to their socio-demographic and fiscal needs. It also creates an ecosystem of pilot projects that might eventually uncover best practices relevant for the broader system. Not surprisingly, the healthcare reform landscape has evolved into a heterogeneous patchwork. A few examples illustrate this variety:

- Elimination of drug markups in all public hospitals is a key policy designed to curb physicians' over-prescription of drugs and to limit use of expensive



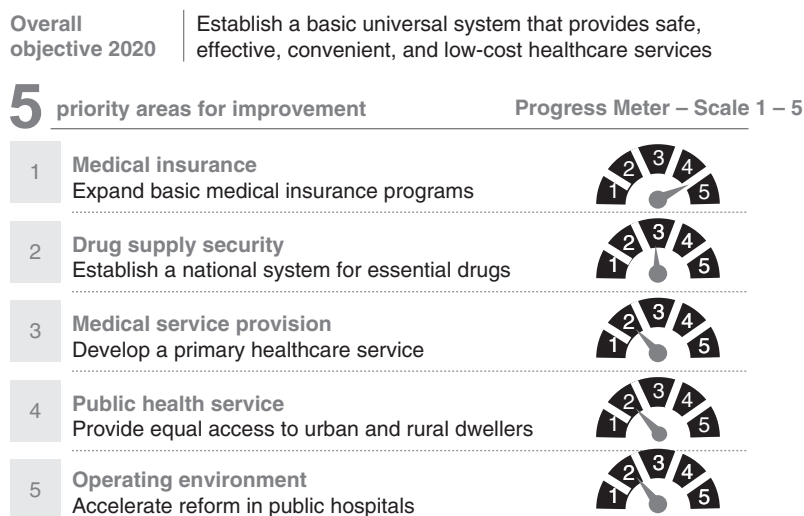


Figure 5.1 Progress on the five key priorities

Source: Healthcare reform 12th Five-Year Plan; McKinsey analysis.

drugs. While 100 pilot cities can claim that they have carried out this policy, others have yet to do so.

- Changing patients' self-referral to Class III hospitals is another important policy. Guangzhou initiated a guideline in April 2015 to promote the establishment of referrals from primary care clinics to Class II/III hospitals. Reimbursement at Class II/III is only available for patients if they have been referred through primary care facilities. Only a few cities follow this model.
- Fee-for-service hospital reimbursement is also a big issue. While most hospitals in the country are reimbursed on a fee-for-service basis, Beijing has been experimenting with diagnosis-related groups (DRGs) for several years. Tianjin is piloting capitation models (fixed annual budget for each patient treated) to encourage prevention and cost-effective care.
- Implementation of the Provincial Reimbursable Drug List (PRDL) varies. The list may feature 2,342 molecules, as in Jiangxi, or include 2,051 traditional Chinese medicine (TCM) products, as in Shanghai.
- There is also considerable variation in drug reimbursement. Drugs may be fully reimbursable according to one city's ruling, but may be an out-of-pocket expense for patients in a nearby city.

Heterogeneity has thus become a key characteristic of China's healthcare system – an important fact to keep in mind as we reflect on the progress of reform and consider what developments to expect in this dynamic stage of the process.

The Chinese government has taken numerous steps to accelerate the healthcare reform since the first announcement in 2009. These adjustments have been consistent with the initial objectives and overall direction of the program. Table 5.1 describes the key announcements around the main schemes.

### Medical Insurance: Objective 1

The backbone of China's public health insurance system consists of three insurance schemes: Urban Employee Basic Medical Insurance (UEBMI) covering city dwellers who are employed, Urban Resident Basic Medical Insurance (URBMI) covering retirees and students in cities, and the New Cooperative Medical Scheme (NCMS) covering rural residents. The three programs cover more than 95 percent of the Chinese population, but how they work varies widely between different cities and rural areas. For instance,

**Table 5.1 Key announcements on major themes**

Major Themes	Key Announcements
Medical insurance	<ul style="list-style-type: none"> <li>• “Opinions on Further Implementing Critical Disease Insurance (CDI) for Urban and Rural Residents” released by the central government in 2015 to push for the full rollout of CDI</li> <li>• Supportive policies for Private Health Insurance (PHI) development released by central government, including encouragement for PHI to offer CDI service and run PHI pre-tax deduction pilots</li> <li>• Convergence of three BMI schemes is under way, while the combination of URBMI and NCMS has been successfully piloted in many regions</li> </ul>
Drug supply security	<ul style="list-style-type: none"> <li>• First national Essential Drugs List (EDL) published in 2009 with updates and expansion in 2013</li> <li>• Low-cost drug list released by NDRC in 2014 to ensure the supply of low-margin drugs</li> <li>• NDRC lifts price controls on most medicines in 2015 to promote medicine price reform and encourage reasonable prices</li> </ul>
Public health service	<ul style="list-style-type: none"> <li>• “Opinions on Establishing General Practitioners System” released in 2011 to address talent shortage in primary care facilities</li> <li>• “Opinions on Further Improving Drug Supply and Management in Primary Care Facilities” released in 2014 to permit Non-EDL drug usage in primary care facilities, thus improving access to medication</li> <li>• Mandatory referral system announced in pilot regions (e.g., Guangzhou: reimbursement ratio at Class III/II is lowered if patient is not referred through primary care institutions)</li> </ul>
Hospital reform	<ul style="list-style-type: none"> <li>• “Guidance on the comprehensive reform of city public hospitals” released in 2015 to increase the number of public hospital reform pilot cities from 33 to 100 nationally</li> <li>• Pilot reform to separate management and operation in hospitals has already been implemented in some regions (e.g., Shanghai Shengkang Hospital Development Center)</li> <li>• “National Planning Guideline for the Healthcare Service System (2015–2020)” released in 2015 with emphasis on the opening up of the hospital space to private investments</li> </ul>
Compliance environment	<ul style="list-style-type: none"> <li>• NHFPC issued two sets of regulations in 2013 to prohibit misconduct and to push for ethical behavior</li> <li>– “Blacklist Regulations” targeting pharmaceutical manufacturers and distributors</li> <li>– “9 Prohibitions” targeting healthcare providers and institutions</li> </ul>

Source: Government policies.

a worker in Shanghai will have a different public health insurance scheme from a worker in Guangzhou. Chapters 4 and 11 describe the three main national medical insurance schemes in detail (see Table 11.1).

The National Reimbursement Drug List (NRDL) plays an important role in the insurance system. The NRDL is issued by the Ministry of Human Resources and Social Security (MoHRSS). The NRDL determines which drug is reimbursed and to what extent. The current list, which dates to 2009, covers 2,127 molecules in two sublists. Its “A list” is centrally determined; a “B list” is also centrally determined but allows up to 15 percent

substitution by the provincial government. For patients with basic medical insurance, drugs on RDLA are fully reimbursable, whereas drugs on RDLB are 50–80 percent reimbursable.

The government’s stated goal is to cover 100 percent of the population by 2020. Recent statistics indicate that coverage has already reached more than 95 percent.<sup>2</sup> The government has advanced a goal to reduce out-of-pocket spending from the current levels – in 2013, out-of-pocket spending stood at 34 percent of healthcare expenses – to below 30 percent. The effective reimbursement coverage through the basic insurance schemes still varies significantly by city and province, and

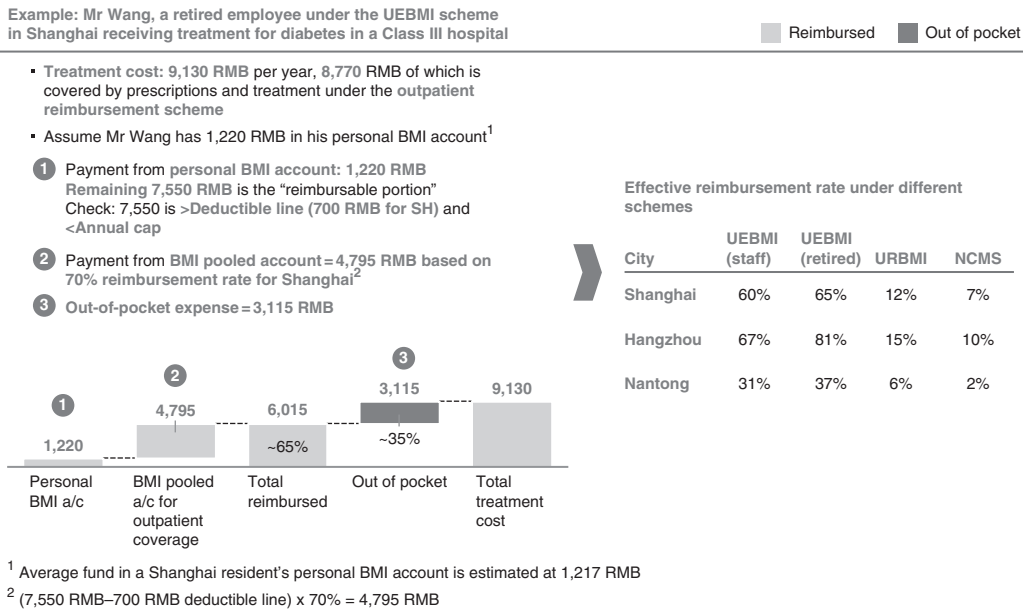


Figure 5.2 Reimbursement rates vary even at the same location

Source: Government policies.

co-payments (the fixed amount that the health insurer requires a patient to pay for a medical service) can be hefty. Figure 5.2 illustrates the burden using an example of a retiree with diabetes. The differences are more marked for patients needing high-priced oncology drugs, where the effective reimbursement rates vary between 15 percent and 30 percent depending on provincial policies and the cost of the drug treatment.

### Gradual Improvement of Basic Insurance Schemes

Overall, reimbursement levels have risen and annual caps raised in many areas over the past few years. For example, the URBMI schemes in Kunming and Shaoxing have reduced co-payments for outpatient services. Kunming has reduced the co-pay from 80 percent to 50 percent and increased the annual cap by 50 percent to 400 RMB; Shaoxing has reduced the co-pay from 65 percent to 50 percent and increased the annual cap to 500 RMB.<sup>3</sup> In addition, Kunming has increased the annual

inpatient cap to 60,000 RMB, while Shaoxing has lowered the deductible for inpatient service from 400 to 200 RMB. Reimbursement now covers at least 50 percent of self-paid bills for procedural costs, drugs, and medical devices.

### Critical Disease Insurance

Another high-impact initiative has been the implementation of Critical Disease Insurance (CDI). The intent is to provide the groups most vulnerable to large healthcare expenses – such as individuals insured under NCMS and URBMI – with additional protection against catastrophic illnesses. The government set up a funding and operational model for this “top-up insurance” that provides secondary reimbursement for all or part of patients’ out-of-pocket spending over the standard basic medical insurance reimbursement ceiling. It asked private insurance companies to bid for providing the desired coverage, essentially using public funds to buy private group insurance at scale for certain populations. Several large, local private health

insurance companies followed suit and have since become important parts of the CDI system including China Pacific Insurance Group (CPIC) and China Life.

The CDI system was issued in 2012 for the NCMS-covered population and started with a list of 20 critical diseases to be reimbursed at higher rates.<sup>4</sup> It has evolved toward an add-on insurance broadly covering healthcare costs for life-threatening diseases that exceed certain limits, irrespective of the diagnosis. The government has requested that CDI reimburse at least 50 percent of the total medical bill for critical diseases for rural and non-working urban residents. Participants do not need to pay extra fees for the new insurance coverage. By April 2015, CDI had been piloted in all 31 provinces, covering roughly 700 million people. At the recent State Council summit (July 22, 2015) hosted by Premier Li Keqiang, the government announced that CDI programs should be rolled out to all provinces by the end of 2015 to cover all rural and non-working residents. By 2017, a robust CDI system should be established to form a solid network with other existing medical assistance programs.

### *Risk-sharing Arrangements with Pharmaceutical Companies*

Some cities have explored innovative ways to work with pharmaceutical companies to improve access to expensive therapies that are not yet covered by the NRDL or the PRDL. For instance, Qingdao has negotiated access programs in which the pharmaceutical company donates a proportion of the medication used in the city to patients who meet certain physician evaluation and financial criteria. The remainder of the treatment cost is covered by the Qingdao government. Diseases and drug treatments covered by these schemes include multiple sclerosis (recombinant interferon beta-1b), leukemia (Dasatinib), breast cancer (Trastuzumab), and rheumatoid arthritis (Adalimumab). Established in 2012, the Qingdao scheme was extended to additional drugs in 2015, suggesting that the model is sustainable for both the public payer and partnering companies alike.

### *Convergence of NCMS and URBMI*

The government is now contemplating a merger of the NCMS and URBMI schemes that would elevate NCMS coverage to URBMI standards. Just as important, the administration of NCMS would move under the umbrella of MoHRSS, creating a large “super-payer” in charge of all public insurance in China (at present, NCMS is administered by the NHFPC). Pilots are under way in several regions, including Sichuan, Tianjin, and Zhejiang.

### *Promotion of Private Health Insurance*

While China has executed its public health insurance agenda, the government also sees an important role for private health insurance (PHI). For example, it has initiated measures such as tax breaks for PHI plans and relaxation of long-standing rules limiting foreign health insurers to minority ownership or 50–50 joint ventures with local players. Foreign insurers can now operate majority-owned businesses in Shanghai's Free-Trade Zone.

There is a clear need for approaches that promote faster access to appropriate care, guaranteed quality of care, and (for select consumer segments) improved hardware and infrastructure (such as advanced diagnosis and treatment devices and high-end hospital wards). Nevertheless, the PHI market in China is still nascent (see Chapter 11). This stems from several systematic challenges, such as differing standards of treatment in public hospitals, lack of data transparency required for needs-based product design and proper claims management, and high-cost distribution models.

### *Outlook for Reform Objective 1*

The government's stated goal is to expand the coverage of basic medical insurance and steadily improve the level of security it provides. However, each province or city has to work within basic medical insurance budgets that could limit the depth of coverage that can be achieved. This has led to a fragmentation of reimbursement schemes. Whether innovative patented drugs, which are expensive yet potentially lifesaving, will ever be

reimbursed at the national level, local level, or not at all is unclear. Innovative approaches like Qingdao's patient access programs for specific therapies will therefore be of interest to manufacturers of high-cost drugs and medical devices. We expect further activity and innovation as industry and public payers explore win-win partnerships to provide access to patients. Basic medical insurance seems to have found its way as a pillar of health insurance, making full coverage by end of 2015 a credible scenario.

As for PHI, several local and multinational companies are excited about its future, and substantial investments are being made in the quest for pole position in this largely untapped market. The emergence of digital channels and a growing private healthcare sector offer support for the optimism of PHI players.

## Drug Supply Security: Objective 2

In 2004, the Chinese government set up a national Essential Drugs List (EDL) to define the minimum number of molecules needed to cure the broadest spectrum of diseases at the lowest possible cost. At that time, China had no systems to manage the cost, availability, and quality of these drugs, nor did it have any policies in place to cover tendering, supply, or distribution.

The initial EDL was revised in 2009 following the announcement of the healthcare reform. The revised list covered 307 molecules with more than 2,600 formulations, outlined new policies for tendering, and described a purchasing and delivery system that would be linked to the reimbursement system. All 307 molecules were fully reimbursed, and all community health centers (CHCs) were expected to use the EDL for all medication needs. Pharmaceutical companies with molecules on the EDL had to decide if they wanted to bid. If they chose to participate and won, they had to accept price cuts. While they would almost certainly see an increase in sales volume, they had no guarantee that the gain would compensate for the price cuts.

In 2010, the market was dominated by the Anhui model, which was initially supported by the central government, and which specified "double envelope" bidding and "the lowest price wins." Double envelope refers to the bidding method: "first envelope" covers the technical evaluation focusing on product quality, while the "second envelope" covers the price evaluation. Under this model, price was the initial criterion for screening, and the offer with the lowest price made it to the next round. Only then were criteria such as quality and guaranteed supply amount considered. However, downward pressures on price prompted some manufacturers to stop supplying at low cost, creating shortages of some drugs. Moreover, some CHC physicians wanted more drug options or were concerned about the quality of EDL drugs. Concerns about access and quality stirred a public debate. Some pharmaceutical companies argued that quality be given a higher priority than cost.

In response, the government adjusted its initial policy. In March 2012, the government issued a new document (State Council No. 11) that altered the winning criterion from "lowest price" to "quality first, appropriate price." In March 2013, the State Council General Office issued a revised EDL policy (State Council No. 16) that contained further adjustments. First, quality was reaffirmed as the primary criterion and reasonable price as the second, with evaluation taking place through the "double envelope" process. Second, the EDL was to be adjusted every three years to reflect actual usage and needs. Finally, there was to be a centralized purchasing mechanism for certain types of drug, notably EDL drugs that (a) have been on the market for a long time and (b) have relatively stable prices, enabling uniform prices to be determined by the government. National pricing advocates are also supporting experiments with price and volume agreements as a way to reduce prices further. These policies would help to increase transparency over EDL procedures.

In May 2013, a new version of the EDL was released with 520 molecules. Disease coverage

was broadened to include cancer and involved more drugs for certain areas such as blood disease and psychiatric disorders. The government further extended access to EDL drugs and pricing beyond grassroots institutions to Class II/III hospitals. More than 20 provinces launched EDL usage requirements for their hospitals. Provinces followed the requirements set by the central government on EDL revenue share (by value): 100 percent in grassroots institutions, at least 40 percent in Class II hospitals, and 25–30 percent in Class III hospitals. In September 2014, the NHFPC released a guideline allowing the use of non-essential drugs in grassroots medical facilities, although essential drugs were still given priority.

An important trend causing concern among pharma companies is the proposed linkage between EDL and non-EDL tendering, which has been implemented on a pilot basis in regions such as Qinghai and Shandong. As a result of this linkage, a pharmaceutical company that loses an EDL tender (or decides not to participate in the EDL) will automatically lose the RDL tender altogether if the molecule is EDL listed. Another concern triggered by the current tendering dynamic is that prices could be driven down to levels that are simply not sustainable for pharmaceutical companies, eventually putting supply of medication at risk.

### *Outlook for Reform Objective 2*

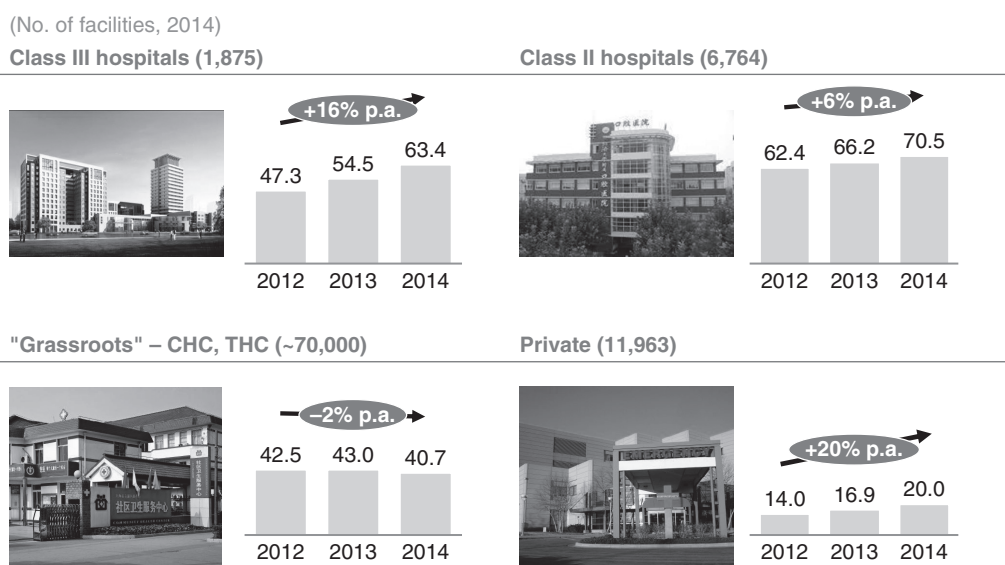
Although we cannot predict what future versions of EDL will look like, we can safely assume that the molecule list will expand further and that the government will continue to push for its adoption as a mainstay of hospital prescribing beyond grassroots facilities and Class III maximum-care providers. Hospitals' tendency to prescribe drugs outside the EDL is likely to be challenged by a mandate for a specific percentage of prescribed value to come from EDL drugs. Given the much lower prices of these drugs, the great majority of prescribed daily doses and volumes would be EDL drugs under such a mandate. The impact of these trends will depend on the number of molecules included on EDL, the relative weighting of quality and price, and the extent of EDL adoption across hospital levels (classes).

### **Medical Service Provision: Objective 3**

Public institutions underlie China's healthcare system. According to the recent available data, 90 percent of inpatient cases were treated in the public system in the first five months of 2015. The public system is organized by levels, with Class III hospitals representing large maximum-care providers and academic medical centers, often with over 1,000 beds, and boasting China's best medical talent. The lack of any steering mechanism for referrals has led to over-use and crowding of these hospitals – at the expense of Class I and II hospitals which are under-utilized (see Figure 5.3). This likely impedes the achievement of good patient outcomes, as Class III hospitals are neither designed nor able to provide the continuous care and patient education needed to treat the millions of people suffering from chronic diseases (for example, diabetes, hypertension, and cardiovascular disease).

The mismatch of care settings partly explains why some diseases are under-diagnosed, or diagnosed at a relatively late stage, in China. The unbalanced medical allocation leads to the low efficiency of disease treatment and management. For example, 70 percent of cancers are mid- or end-stage at the time of first diagnosis.<sup>5</sup> Fewer than 20 percent of patients suffering from depression are diagnosed.<sup>6</sup> The control rate of hypertension is less than 10 percent across the nation, compared with 48 percent in the United States.<sup>7</sup> Beyond poor clinical outcomes, the lack of a patient referral network leads to several economic inefficiencies: minor diseases are treated in maximum-care settings, tests and examinations are duplicated across multiple healthcare facilities, and patients fail to comply with the treatments that have been prescribed and paid for. Moreover, the combination of long wait times and time-short physicians has stressed patient–doctor relationships (see Chapter 7).

From a reform perspective, one government policy to redress this misallocation of demand and supply is the establishment of a primary care infrastructure. The government envisions a broad network of CHCs that act as primary care units. They are designed as the first point of contact for healthcare where some minor diseases are treated



Note: 2014 volume is extrapolated based on January–November data.

Figure 5.3 Medical facilities' inpatient flow, in million patients

Source: NHFPC, Team analysis.

directly, while patients with other and more serious conditions are referred to appropriate specialists in Class II and III hospitals. More importantly, they are the principal provider for continuous management of chronic diseases.

To date, more than 33,000 CHCs and CHSs (community healthcare stations) across China have not yet diverted patient flow from larger hospitals. In fact, CHCs may actually be waning in relevance as hospital patient flows outgrow those of CHCs in both absolute and relative terms. For example, in the first five months of 2015, Class III hospitals had to accommodate 52 million more patients compared with the same period in the previous year, a 10 percent increase year over year. In that same period, patient loads at CHCs and CHSs grew by 5 percent, or 12 million visits.

### Outlook for Reform Objective 3

China needs a robust primary care system to sustain its healthcare in the long run. The government might pursue several avenues to bolster this system. First, it could close ailing CHCs, consolidate

the remaining centers, and continuously upgrade those with stable patient flow. Second, the government could grant more authority to hospitals to operate the CHCs. This essentially would create referral networks for large public hospitals, and in turn commit them to steer patients to those centers and relieve the congestion in their outpatient areas. Third, the government could open the CHC market to private investment to draw needed entrepreneurship, talent, and capital.

For its part, the government would perform a steering role, managing cost (for example, through capitation models) and monitoring clinical quality and outcomes. Indeed, about 15 percent of patients are already being treated in CHCs that operate outside the public system and are outgrowing their government-run counterparts (7 percent year over year for the first 5 months of 2015 compared with 4.7 percent growth last year). In sum, evidence from China and elsewhere suggests that a more diverse CHC landscape and continued efforts by the government to strengthen the role of county hospitals on the one side and increasing operational and financial pressure at Class III hospitals on the other side

will eventually lead to a sustainable primary care system.

### Public Health Service: Objective 4

While patients in urban areas face significant challenges to obtain access to the right level of healthcare, they pale in comparison with the daunting task China confronts in providing access to its vast and dispersed rural population. Rural patients must deal with both a lack of hospitals (3.4 beds per 1,000 inhabitants in rural areas compared with 7.4 in cities) and a low ratio of healthcare workers to local people (3.6 healthcare workers per 1,000 inhabitants in rural areas compared with 9.2 in cities).<sup>8</sup> Logistics are especially challenging in more remote areas.

In its desire to provide more equal access to healthcare, the government has invested massively in rural provider infrastructure. An initiative from 1965 to 1970 undertook the construction of about 56,500 township healthcare centers (THCs); these were intended to be the cornerstone of frontline healthcare delivery in rural areas. The extensive bricks-and-mortar infrastructure suffered from a lack of clinical talent, modern equipment, and patient acceptance. As part of the current Five Year Plan 2011–2015 (FYP), the government has invested another 30 billion RMB (roughly \$5 billion) in improving infrastructure, upgrading medical talent, and implementing population health programs; the latter programs include increasing the examination rate of common diseases among rural women to deepen the impact of rural healthcare reform. The number of THCs fell from roughly 38,500 to 37,000 between 2009 and 2013, since the government focuses more on the quality of THC instead of pursuing blind expansion; 94 percent of those remaining were upgraded to comply with the latest standards and requirements of healthcare reform.<sup>9</sup>

To develop talent, the government has invested in rural training programs, including 2–3 billion RMB of spending by the end of 2012.<sup>10</sup> The programs encompass (a) clinical training for 4.95 million physicians, nurses, and other healthcare workers, (b) training in common diseases for some 4 million healthcare workers, and (c) general

practitioner training for 36,000 physicians in grassroots medical institutions. The government has also introduced a subsidy of 6,000 RMB per person to encourage medical students to work in grassroots medical institutions. The proportion of those physicians with undergraduate degrees working in CHCs increased from 30.8 percent to 35.3 percent in 2013. A notice on national basic public health services issued on June 5, 2013, specifies several targets to be met by the end of 2013; many have been revised in the new 2015 plan. The goals were (are):

- Increase health information record system coverage to 80 percent of the population, and electronic medical record (EMR) coverage to 65 percent (75 percent in the 2015 plan)
- Cover 30 percent of the population with TCM-based health management offerings such as providing regular TCM-based consultation and offering healthcare instruction to the elderly (40 percent in the 2015 plan)
- Extend the national immunization program to vaccinate more than 90 percent of children, including the migrant population
- Extend health management to more than 80 percent of children such as regular family visits of families with newborn babies and health check programs for those in early childhood (85 percent in the 2015 plan)
- Extend health management to more than 80 percent of pregnant women (85 percent in the 2015 plan), ensuring that each receives five prenatal examinations and two postnatal checks; also improve provision for pregnant women in grassroots medical institutions
- Extend health management to 65 percent of people over the age of 65
- Secure the health management of 70 million hypertensive patients and 20 million diabetes patients (80 million and 30 million, respectively, in the 2015 plan)
- Enhance health education, mental illness management, communicable diseases and public health emergency management, health supervision, funding management, and evaluation programs
- Improve the role of grassroots medical institutions in all the above areas.



### Outlook for Reform Objective 4

The difficulty of assessing progress toward these targets makes it even harder to predict future developments. As in other areas of the reform, the interpretation of the guidelines and the determination to implement them vary widely across the country. Nevertheless, there are indications that progress has been made. For example, the WHO estimates that vaccination rates for Class I vaccines (BCG, DTP3, HepB3, and HCV) have risen by about 5 percent since 2009 to reach almost 100 percent. The incidence of measles has plummeted from more than 50,000 cases in 2009 to roughly 6,000 in 2012, representing about five cases per million people, an incidence lower than, e.g., Germany's.

In other areas, the picture is more mixed. EMRs have been on the agenda since the tenth FYP 2001–2005, but the development of a multitude of approaches in isolation has produced a fragmented landscape that lacks interoperability. That puts the initial goal of EMR implementation – smooth and efficient documentation, storage, and exchange of patient data across hospitals – out of reach except in a few pilot areas in large cities.

Overall, progress seems most marked in areas with one-dimensional goals and key performance indicators (KPIs) such as vaccination rates and infrastructure delivery. These respond well to appropriate funding and do not require a highly skilled workforce or complex coordination across regions and stakeholders. It remains to be seen whether similar success rates can be achieved in areas requiring longer-term coordination and balanced incentives across different stakeholders – such as disease management for chronic diseases, implementation of a truly integrated EMR system, and educational efforts capable of changing people's behavior at scale.

### Operating Environment: Objective 5

A main objective of the reform is to build a sustainable, cost-effective, and high-quality public hospital system. This involves four core elements:

- **Funding mechanism:** moving to a zero markup (ending the current margins on drugs and medical devices used in hospitals), increasing government

subsidies and medical service charges as the main sources of funding, and reducing dependence on drug sales

- **Cost control:** capping budgets and establishing payer–provider relationships with effective cost-control mechanisms, such as DRGs and a cap on total costs
- **Management transformation:** setting clear KPIs for service quality and operational efficiency
- **Improvement in resource balance:** reallocating resources from large hospitals in big cities to grassroots institutions such as CHCs.

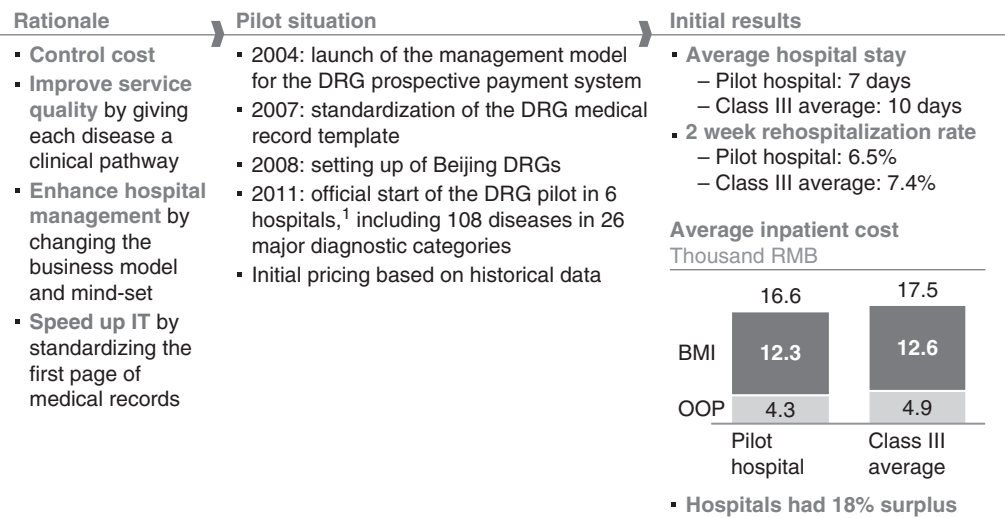
To date, none of these measures has been broadly implemented. However, major elements of the reform are being tested in pilots at the level of hospital classes (such as Class III), counties, and individual cities. An examination of a few examples yields some insight into the depth and breadth of the reform.

### Counties

The National Development and Reform Commission – China's economic planning and management agency – and the Ministry of Health plan to invest RMB 40 billion in upgrading more than 2,000 county hospitals. The first-wave pilot, including 311 county hospitals, was planned in three phases:

- *By the end of 2011*, at least one hospital per county should have reached the Class IIA level; county hospitals should have been capable of treating common diseases, severe or emergency diseases, and some complex diseases; and physicians should have been trained in THCs and village clinics.
- *By the end of 2015*, all county hospitals should reach the Class IIA level and be able to provide sufficient care to their local population.
- *By the end of 2020*, the quality gap between county and Class III hospitals should be closed; patient care conditions, treatment skills, and hospital management should have been upgraded; and there should be continuous improvement in medical care to county level populations

Another 700 county hospitals joined the pilot in April 2014. In early 2015, NHFPC minister Li



1 Peking University 3rd (the first to pilot, starting in November 2011), Peking University People's, Youyi, Chaoyang, Xuanwu, and Tiantan

*Figure 5.4* Early success with DRGs in Beijing Class III hospital pilots

Source: 2012 Xiamen H-CEO Conference.

Bin commented on the 2015 healthcare reform plan, stating that the county hospital upgrade program would be a priority for the coming year. The focus would be implementing the zero mark-up policy and improving quality of county hospitals.

### Cities

Building on the DRG model it set up in 2008, Beijing introduced a pilot in six Class III hospitals in 2011 (there were still six pilot hospitals based on the latest announcement). The results have been encouraging (see Figure 5.4).

Shenzhen's public hospital reform focuses on changing the funding mechanism and introducing measures to control costs. The plan is to introduce a zero markup in two stages, the first limited to local patients and the second extended to all patients, including migrants. The funding mechanism will be improved by gradually increasing government contributions and increasing the service fee according to the hospital's level (class). The payment mechanism will be improved by moving to disease- or category-based payments for inpatients and to mostly capitation payments for outpatients.

Competition will be introduced by allowing patients to use their prescriptions to purchase drugs at pharmacies: patients now can buy drugs in medical insurance-designated pharmacies, thus further lowering the healthcare cost. Drug purchasing will be reformed by centralizing purchasing and distribution and allowing manufacturers to sell directly to hospitals; this has been piloted in selected hospitals such as the University of Hong Kong-Shenzhen Hospital.

### Outlook for Reform Objective 5

Progress to date in hospital reform has been the slowest of the five pillars. Many pilots have been launched, but they have not yet been fully evaluated.

In addition, the government should consider focusing on implementing treatment standards that are unified and linked to an appropriate funding mechanism that ensures hospital solvency. At this stage, hospitals other than those in Class III seem to have difficulty offering care at reimbursed fees; their real costs are higher than the sums they receive from the various public programs.

Experience from other, more mature health systems suggests that it will be helpful for the government to consider whether and how a division between medical and managerial leadership roles, supported by clear KPIs in service quality and operational efficiency, could support delivery of its objectives for transforming hospital management.

When discussing the status of hospital reform in China, we also must reflect on the progress made in the private sector. The objective of treating 20 percent of the patient population in private hospitals by the end of 2015 may not be achieved. But several regulatory changes may accelerate the provision of private offerings: (1) the official guideline that allows physicians to work at multiple sites helps to relieve the talent challenges of the private hospital sector; (2) the option to set up private hospitals as wholly foreign-owned entities; and (3) the possibility that public insurance programs might also be used to pay for treatment at private hospitals.<sup>11</sup> Regulatory changes are pointing in the right direction. Yet all the administrative requirements facing private hospitals and clinics in China create challenges and roadblocks.

## Summary

There is an enormous effort under way at central, provincial, county, and city levels to implement the main content areas of a universal healthcare system that ensures affordable access to quality care and offers choices in the private sector for those who can afford it. The healthcare system's major stakeholders share an understanding of what has to happen next to further implement the reform and to live up to its vision. While funding reform is a continuing issue among decision-makers, one can argue that China, as an economy, has the means to pay for a reasonable system offering universal access to care. China is at present spending 5.6 percent of its gross domestic product on healthcare and has room to continue on its trajectory of offering access to quality healthcare for its population.

The biggest challenges will involve management of chronic diseases and rigorous prevention programs, development of the medical workforce at the speed required, and system levers (see Figure 1.7) such as steering mechanisms to the appropriate level of care. The government's reform program has identified many of the healthcare system levers that have proven effective in other countries. These levers include an increase in public-private partnerships, which is leading to an acceleration of the private sector's ability to offer increased healthcare choices and improved outcomes.

We remain optimistic that China will select the system levers that have proven effective in other countries. The open question is how long this journey will take and how radical some of the changes will be. The unique situation of population size, geographic scale, and urban-rural dynamics creates a level of complexity that no other country faces. We anticipate a significant increase in public-private partnerships and acceleration of the private sector's ability to offer healthcare choices to individuals. The sector will remain dynamic, providing private enterprise unique opportunities to participate in improving the healthcare of the Chinese people.

## Notes

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