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China's healthcare provider market

Riding the waves of reform

Contents

Foreword

China's enormous healthcare market continues to expand rapidly, driven by an aging population, economic growth and an expanding basic health insurance. In 2013, healthcare expenditure in China hit RMB 3.2 trillion, maintaining an annual growth rate of 17.2% over the past 9 years. Yet healthcare expenditure accounts for a mere 5.6% of GDP, in comparison with a high-income country average of 7.7%. Given population trends and consumption patterns, it is evident that there is room for promising growth in China's health care market.

At the same time, health policy is undergoing extensive reform. The government has been focusing its efforts on ensuring the availability of basic medical services for the whole population, while encouraging private capital investment to improve service quality and meet the public's diverse and complex needs. Deepening reform efforts are bringing new opportunities to invest in the healthcare market and bring profound change to the healthcare landscape.

Private hospitals, which remain a minor player within the healthcare system, are in a phase of rapid growth thanks to powerful policy support. By leveraging the power of both industrial and institutional capital, private hospitals will realize accelerating integration and market expansion, and improving management capabilities, technical expertise, service quality and scale-oriented operation. Nevertheless, the rapid market expansion will bring greater risks for which careful decision-making is essential. We believe that private hospitals should carefully consider the local economic context and competitive landscape, as well as healthcare and tax policies, to determine the appropriate strategic plan.

We identify four promising growth areas. First among these is premium healthcare. The high-end healthcare market will extend into lower-tier cities, while main customer groups, on which key specialties focus, will shift from middle-class to high-end customers. At the same time, services that integrate medical services with tourism are also expected to grow. Second among these is specialty chains. Specialties that are more reproducible and deliver higher service quality are expected to be hot spots for investment. Meanwhile, with hospital reform, particularly with increased medical professional mobility, private hospitals will be able to enter specialty areas that previously held high technical barriers. Third, general hospitals have high barriers to entry given its greater requirement for funds, talent and management. This also means that these hospitals with high public standing will be hard to duplicate with an apparent first-mover advantage. Based on these observations and the obvious supply shortage, we will see greater interest in investment in general hospitals over time. In addition, increased emphasis on quality of life and health services will accelerate the development of the health sector; the rapid development of health capital markets, and the interest of traditional medical institutions towards telemedicine, mobile health and wearable devices is evidence of this change.

Public hospitals are expected to hold a dominant role in China's healthcare system, providing 90% of healthcare services and retaining a strong pool of talent and medical resources. However, national health reform is forcing public hospitals to overhaul their revenue streams, improve their service efficiency and cut costs, while painting a new reality where both patients and clinical talent flows towards private hospitals. In the face of this brand new world, we suggest that the public hospitals work on the following five aspects: construct better performance management systems, improve the patient experience, introduce marketing management systems and establish a solid relationship of mutual trust with patients, encourage standardization of medical services and clinical processes, and optimize and integrate hospital information systems.

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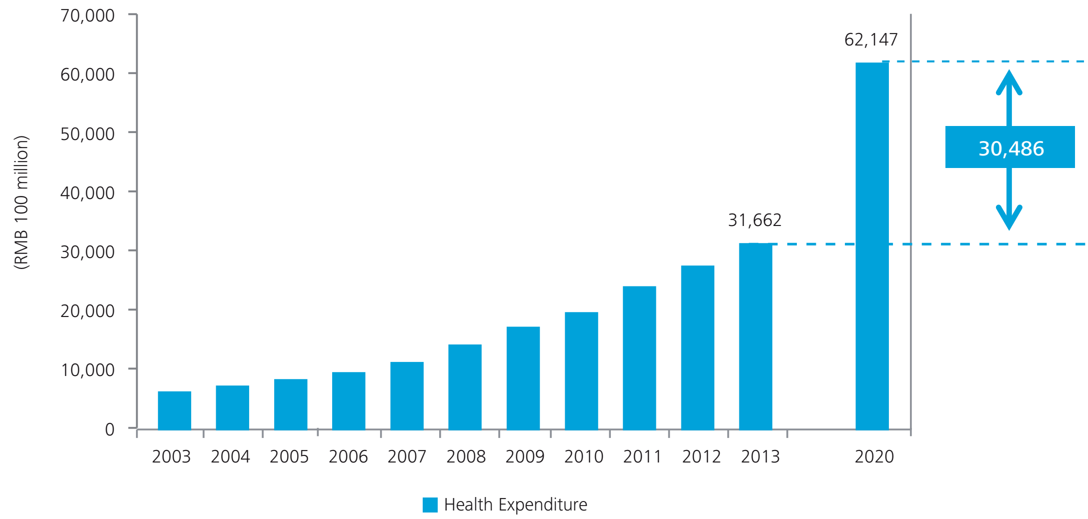
The Chinese Health Care Market is Growing Rapidly

In 2013, health expenditure in China reached RMB 3.2 trillion, quadrupling its 2004 value with a compound annual growth rate of 17.2%. At the same time health expenditure accounts for a mere 5.6% of GDP, a great deal lower than many high-income countries and a few of China's neighbors (figures 1 and 2). If spending were to expand to 6.5% of GDP, as proposed in the NHFPC's "Healthy China 2020" report, healthcare would account for RMB 6.7 trillion by 2020 .

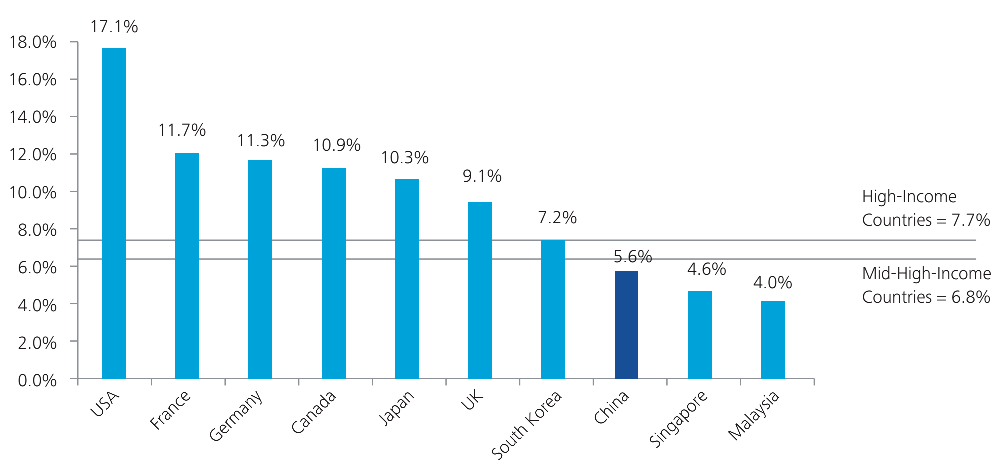
Demand for healthcare is also growing at a breakneck speed thanks to aging population, urbanization, growth in individual wealth and advancement of both basic and private medical insurance. Yet supply-side growth is sluggish by comparison. Medical institutions have grown by only 20% between 2004 and 2013, healthcare professional number by 50%, and 90% the number of beds available in medical institutions.

Figure 1: Health Expenditure in China



Source: Health Statistics Yearbook, Deloitte Analysis

Figure 2: Health Expenditure as Percent GDP （2013）



Source: World Bank and Deloitte Analysis

[1] Estimate uses 2013 GDP and assumes a steady annual growth rate of 7.7%.

Aging Population

China' vast population is aging fast. According to the China Statistics Yearbook, China's 130 million people over 65 accounted for nearly 10% of the population in 2013, up from 7.6% in 2004. The elderly, who have a higher incidence of disease, longer and often more complicated treatment courses, use medical services more frequently than their younger counterparts (see figure 3). As the Chinese population ages, demand for medical services is expected to become higher than ever.

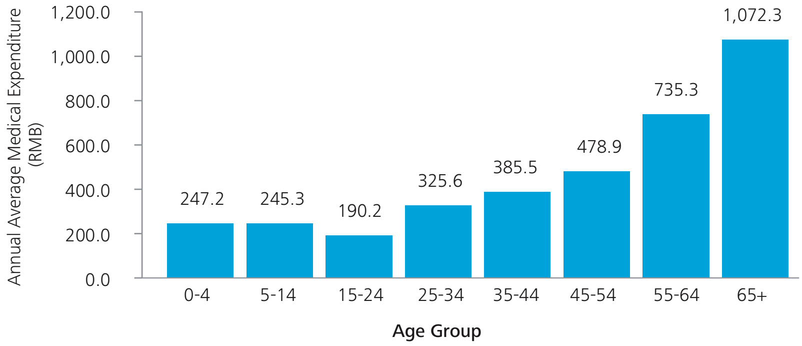
Urbanization

Driven by economic change and changing national residential policy, China continues to urbanize. The urban population has grown from 41.7% of the total in 2004 to 53.7% in 2013. As these new urban residents realize improved economic conditions, their demand for medical services will in turn increase. According to the National Bureau of Statistics, in 2013, urban residents spent 1.8 times more than rural residents on healthcare. At the same time, as these newcomers become acclimatized to urban living, their disease profiles will also shift towards diseases seen in city life such as increased heart disease and diabetes, which will boost demand for care in those areas.

Increasing complexity of health care demand

As Chinese people become richer, accumulate more wealth and grow more sophisticated in their health care knowledge, demand for medical consumption is expected to become more diversified and complex. Patients will be more concerned with privacy during care, and will be more willing to pay for better service and high-tech care, driving the growth of premium health care. Rehabilitative services will develop as the health care system becomes more aware of these needs. Age-specific sub-specializations will flourish within the medical community. Patients will better understand to seek care for screening and prevention, rather than waiting to treat emerging symptoms at a much later stage of illness. These trends, promoting development and diversification, will expand the system's scope and reach, while growth of the industry's demand as a whole will drive further segmentation.

Figure 3: Annual Average Medical Expenditures in Different Age Groups



Source: Peking University National School of Development, the 8th Annual China Health Care Forum

Expanding basic medical insurance

Basic medical insurance has been a major policy focus over the last 10 years, and has been slowly but surely expanding in depth of coverage. The National Development and Reform Commission reports that the three basic medical insurance systems covering urban workers (UEBMI), urban residents (URBMI) and the rural population (NRCMS) continue to cover 95% of the population. Under both URBMI and the NRCMS, the government subsidy has been lifted to RMB 280 per person per year and hospitalization expense payment has been raised to 70% and 75% respectively. Meanwhile, the Government has been actively promoting critical illness insurance, mandating that all provinces launch at least pilot versions of critical illness insurance prior to June 2014[2]. The gradual promotion of the basic medical insurance system will continuously improve healthcare affordability among the Chinese population and thereby boost the demand for medical services.

[2] Notice of the Medical Reform Office of the State Council on Accelerating the Promotion of the Critical Illness Insurance for Urban and Rural Residents, National Health and Family Planning Commission, February 2014

Healthcare Reform Policies Proundly Impact the Health Care Market

Healthcare reform in China is strongly influenced by policies issued at various levels of government, from the State Council to the National Health and Family Planning Commission. In April 2009, with the State Council's publication of the Opinions of the CPC Central Committee and the State Council on Deepening the Reforms of the Medical and Health System, a new round of health reform was launched, advocating the provision of basic medical services as a public good and emphasizing principles such as guaranteeing basic medical services, strengthening primary care, and improving clinical services, health insurance and pharmaceuticals as well as the connections between these systems. The last 5 years have brought evidence of success in meeting these goals: The establishment of tiered diagnosis and treatment structure and the encouragement of a primary care-oriented medical system with two-way referrals; a framework for basic medical insurance with expanding depth of coverage and on-going, medical insurance payment reform with cost control. Also, public hospital reform has entered a critical stage where management diverges from operation, administration from institution and care provision from pharmaceuticals. As reform continues, bringing new complexities to the Chinese medical system, new opportunities for investment of private capital emerge within the improving public hospital system.

> From 2009 to 2015, medical reform policies have focused on the establishment of both the medical service system at the primary level and the basic medical insurance system, which addresses the issues of medical service availability and affordability. Over the next 5 years, we expect that the Chinese medical reform policies will turn towards enhancing medical service quality.
>
> Sheryl Jacobson, Partner, Deloitte Consulting

Tiered Medical Service System

While a large part of China's population remains rural or live in low-tier cities, China's medical resources are concentrated in large tertiary hospitals in top tier cities. In a culture of distrust towards small-town doctors, patients also preferentially seek medical care in big hospitals whether they have cancer or a cold. As a result, large tertiary hospitals struggle with immense patient loads while community hospitals, village health centers and village clinics are largely underused. In response, the government introduced the concept of tiered medical care by guiding patients to seek first contact at the primary care level, therefore triaging important care to an appropriate venue and freeing room in tertiary hospitals to deal with the most acute and complex problems. To achieve this goal, the government uses a three-pronged approach: first by investing in county-level hospitals, building them up as referral hubs for village clinics and township health centers; Second, by building medical alliances between different levels of care and improving referral systems; Third, developing primary care talent and enhancing primary care capabilities by way of, among other things, developing general practitioners and enhancing their skills through further training in large hospitals. In quantity, the primary care institutional infrastructure has been improved substantially, with the number of primary care institutions increased by nearly 37,000 from 2007 to 2013. According to the plan published in the Planning and Implementation Plan of Deepening the Reforms of the Medical System during the "12th Five-Year Plan" Period, we see that the highlights of the reforms are the enhancement the service capability in the primary-level medical institutions and the establishment of the medical service order characteristic of initial diagnosis in the primary-level medical institutions, tiered diagnosis and treatment and two-way referral. For example, the Plan proposes that in 2015, over 95% of primary-level medical institutions will have attained the set criteria, and efforts shall be made to improve the rate of local first-contact to 90%.

Improving Medical Insurance

Insurance reform has sought to address two aspects of care, improve affordability while controlling cost. The basic medical insurance covers medical insurance for urban workers (UEBMI), urban residents (URBMI), rural residents (NRCMS) and the urban and rural medical assistance programs. Building on this guaranteed coverage for basic medical services, commercial insurance encouraged to satisfy additional healthcare demands. Expanding both basic and commercial insurance availability seeks to improve the public's accessibility to medical care and to meet their healthcare needs. On the other hand, payment reform is used to limit cost inflation. The expansion of primary care and tiered treatment is also being gradually extended to cover care at private medical institutions, and payment reform also encourages these non-public institutions to attach greater importance to cost control and efficiency improvement.

Public Hospital Reform

Public hospital reform is without a doubt among the most challenging aspects of health reform in China. The long-term reliance on drug revenue as the primary income source has undermined public hospitals' reputation as institutions with patient interests valued over pharmaceutical interests. Moreover, the distorted distribution of the vast majority of medical care in tertiary medical institutions has led to great inefficiencies in resource allocation. Management responsibilities are not clear, while the government's influence in surveillance has been weakened through years of inconsistent and lackadaisical enforcement. In the turnaround, public hospital reform addresses two main themes:

- Explore mechanisms to separate ownership and management of public hospitals. This extensive decentralization of power requires significant reform, from transforming government bureaus and loosening government's grip on public hospital affairs, to optimizing public hospital's own governance mechanisms so they can effectively manage themselves. Specific mechanisms to transfer governance include transferring management rights (such as to a government-affiliated agency, large public hospital or private enterprise) and transferring ownership to a private entity (such as the management buy-out or joint stock system).
- Adjust hospital revenue structures to reduce their reliance on pharmaceutical revenue. Reform policy seeks to implement "zero markup" policies to limit drug revenue, and replace the lost revenue with government-supplied healthcare provider salary and increased service charges and fees for other technical services. This has been enormously challenging given the large proportion of hospital income that previously relied on drug income (39.7% of all hospital income in 2012[3]), although promisingly, this ratio has been decreasing over time, and government subsidies have been increasing.

Despite the challenges, public hospital reform remains a top priority for government. In the Key Tasks of Deepening the Reform of the Medical System in 2014 (May 2014, General Office of the State Council) the State Council lists specific and mandatory task completion times for health reform items, a level of detail only seen with the most high-priority reform elements. Elements of emphasis include rural health (expanding pilot sites to cover 500 million rural residents), ownership and management reform, and restricting public hospital expansion, which is believed to leave room for private investment.

[3] 2012 China Health Yearbook

Diversified Hospital Management

Healthcare supply in China has lagged behind demand for many years, and diversifying the management of public hospitals is an attempt to improve supply by allowing support from private investment. Private capital involvement will not only increase supply but also enhance competition from the private sector, causing additional incentives for public hospitals to improve service quality. Since 2009, China has launched multiple initiatives to encourage private investment in medical institutions. Government support for private investment has become increasingly evident in 2014, with the government improving operational policies and physicians' ability to practice at multiple hospitals. Beijing, for example, has not only cancelled the upper limit for registrants in physician multi-site practice but also removed the need for approval for this registration. Private hospital growth has also been helped by the rise of wholly foreign-owned hospitals: The Ministry of Commerce now also allows overseas investors to set up wholly foreign-owned hospitals in 7 provinces and municipalities, including Beijing, Tianjin, Shanghai and Jiangsu. With these policy reforms, private hospitals will also play an increasing role in healthcare management.

City and regional governments should take advantage of their platform to integrate regional private and public resources with functions such as logistics, clinical exams, R&D to promote the development of a clinical ecosystem and maximize synergies between limited resources. This role can also be taken by business corporations.

Yvonne Wu, National Industry Leader, Deloitte China Life Sciences & Health Care

Private Hospitals and Clinics: Favorable Policies and Innovation are the Driving Forces of Growth

Private hospitals must keep innovating and improving if they want to be leading industry players. As [the American quality-improvement company Joint Commission International] JCI has mentioned, it's necessary to continue improving quality, making innovative products and optimizing services.

Zhao Xingli, Vice President, HarMoniCare, Beijing Women & Children's Hospital

In the beginning, private hospitals follow and complement public hospitals. They then become limited competitors in a few particularly strong specialty areas. Eventually they aim to surpass public hospitals in a few strengthened capacities. At present, we are still working on Step 1, following and filling in the blanks.

Guo Yue, President, Shanghai Renji Group

In the future, the private hospitals will act as the "catfish" to promote the ownership reform and development of the public hospitals and force the public hospitals to improve efficiency and enhance service quality.

Jiang Tianfan, Board Director and CFO, Phoenix Healthcare Group

3.1 Private Hospitals: Current Status and Development Trends

Policy Reform in Favor of Private Hospital Development

In 1985, the State Council issued the Report on the Regulations of Reforming of the Health Work, which proposed "to loosen up policy control, simplify administration and release administrative authority, raise funds through multiple channels and pave the way for the development of the healthcare sector." That report heralded the beginning of private investment in the Chinese healthcare sector, previously closed to all but state-owned interests. Over the past 3 decades, private investment has been opened up in cautious stages: exploratory investment from 1985-1992, an acceleration of investment from 1992-2005, and then a slowing of investment and evaluation of potential pitfalls of a market-oriented approach from 2005-2009. Since 2009, reform has opened more than ever to private investment. While basic medical service accessibility remains the top priority, and public hospitals are still recognized as the main pillar for delivering basic medical services, the government will support and guide private investment to improve healthcare supply, allow government resources to better focus on providing basic medical services, and encourage competition to improve public hospital service delivery. To this end, the State Council's 12th Five-Year Plan explicitly proposed that private hospital sevice volume should comprise 20% of the total by 2015[4]. Meanwhile policies supporting private investment appear to be more specific and practical than ever (Table 1), and seem poised to continue this trend in the near future.

[4] It is mentioned in the Blue Book on Private Hospitals (October 2013, China Social Sciences Academic Press) that this 20% target may be difficult to achieve nationwide by the target date.

Table 1: Relevant Policies Regarding Private Capital Investment in Healthcare, 2009-Present

Issue Date	Issuing Department	Title	Description
April 2009	General Office of the State Council	Opinions on Deepening the Reform of the Medical and Health System	It is proposed that the system of running medical institutions with diversified investment entities and modes be formed • Encourage private investment in non-profit medical institutions • Guide private investment to participate in the reform of public hospital ownership • Appropriately reduce the share of medical institutions held by the public sector
February 2010	NHFPC and National Development and Reform Commission, et al.	Guiding Opinions on Pilot Reform of Public Hospitals	• Elected 16 cities as pilot reform sites. Reform includes introduction of private capital into the local medical industry and accelerate formation of a wide range of medical institutions
December 2010	General Office of the State Council	Opinions on Further Encouraging and Guiding the Running of Medical Institutions with Private Investment	• Loosen restrictions to private capital access, encourage the participation of private capital in public hospital ownership reform. Private capital will be considered with top priority in the adjustment and increase of new medical resources; • Optimize the environment for the running of medical institutions with private capital, including tax and pricing policies, designated spots under medical insurance, talent-using environment, academic environment, equipment procurement and government purchase.
February 2011	General Office of the State Council	Major Work Arrangement for the Five Highlights of Reforming of the Medical System in 2011	• Strengthen the regional health planning, control the construction of public hospitals. Private capital will be considered with top priority in the adjustment and increase of new medical resources • Encourage private hospital involvement in ordinary and high-end medical institutions, and impose control over the ratio of the VIP and premium services provided by the public hospitals
February 2012	NHFPC	Highlights of Health Work in 2012	It is proposed that the running of medical institutions with private capital shall be encouraged and regulated
March 2012	General Office of the State Council	Notice on the Planning and Implementation Plan of Deepening the Reforms of the Medical System during the "12th Five-Year Plan" Period	It is strongly proposed that the private medical institutions shall be developed vigorously • It is proposed that by 2015 the number of beds and service volume in the non-public medical institutions should reach 20% of the total volume • Loosened access restrictions: private capital and qualified foreign investors are encouraged to run medical institutions and private clinics • Encourage private capital involvement in a variety of ways in the reform of the public hospitals • Further improve the environment for medical practice and encourage the non-public medical institutions to be developed into the large-scale, high-quality and scale-oriented medical conglomerates.
October 2013	General Office of the State Council	Opinions of the State Council on Promoting the Development of the Health Care Industry	Once again the task of promoting running medical institutions with multiple social resources is stressed, and supplementary explanations in detail are made in terms of liberalization of market access, planning layout, guiding policies on investment and financing as well as tax and price policies.
January 2014	National Health and Family Planning Commission	Opinions on Accelerating the Development of the Running of Medical Institutions with Social Resources	The role of health planning is stressed and specific opinions are worked out with regard to the critical barriers and obstacles in the running of medical institutions with social resources. The policies appear to be more practical and operable than the earlier version: • Detailed guiding opinions are available in terms of loosening up the entry of entities, service areas, the setting-up of large medical equipment and perfection of medical insurance policies, fiscal and tax policies, guiding policies on investment and financing, and approval formalities etc. • Optimize the operational environment, including talent pool, academic and specialty construction as well as the construction of the health information system
April 2014	National Development and Reform Commission etc.	Notice on the Issues Concerning Adoption of the Market-Regulated Prices for the Medical Services Rendered by Non-Public Medical Institutions	• The medical service charges in the non-public medical institutions shall be subject to market regulation • The profit-making non-public medical institutions may set up service items at their sole discretion • The not-for-profit non-public medical institutions may set up service items according to the Regulations of the Nationwide Medical Service Price Items
May 2014	General Office of the State Council	Key Tasks of Deepening the Reform of the Medical System in 2014	It is proposed that the problems of insufficient policy support in terms of entry and operational environment of the running of medical institutions with social resources should be resolved with top priority, with a corresponding timetable of implementation worked out
June 2014	National Health and Family Planning Commission	Urgent Notice on Controlling the Excessive Expansion of Public Hospitals	It is proposed that the excessive expansion of public hospitals should be kept under control, so as to preserve the room for development for both the medical institutions at primary level and the non-public institutions.

Source: Various Chinese government publications, Deloitte Analysis

Despite Rapid Development, Private Hospitals Still Lag Considerably Behind the Objectives Set up by the Government with Remarkable Room for Growth

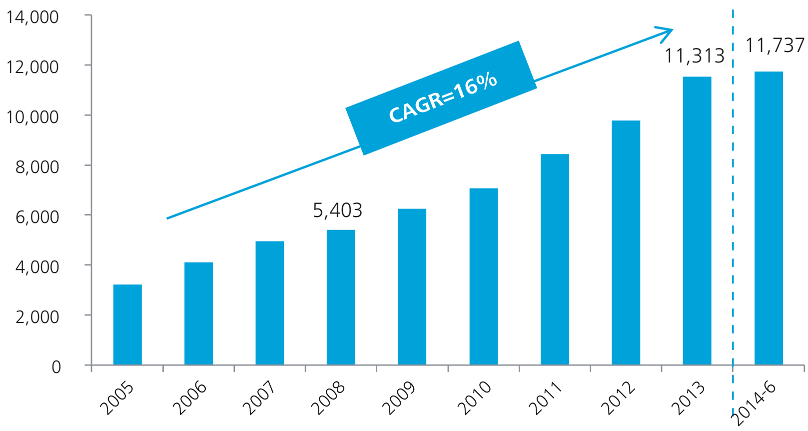
Private hospitals in China have enjoyed rapid growth in recent years. By June 2014, there were 11,737 private hospitals in China clocking an annual growth rate of 16% from 2008 to 2013. Meanwhile, private hospitals' share of the total has risen from 27% in 2008 to 47% in June 2014. Private hospitals are also delivering more services in proportion to their growth. During the first half of 2014, the number of visits to private hospitals reached 145.81 million and the number of discharged patients reached 8.66 million, indicating a growth of 14% and 19% respectively compared with the same period last year.

Although private hospitals account for nearly half the total in number, they are generally smaller in scale and less frequented. The number of visits and the number of discharged patients account for merely 10% of the service volume nationwide, and still falls far short of the State Council target of 20% of bed availability. However, as healthcare expands, private hospitals are expected to continue along their rapid growth trend, fostered by confident policy reform and their growing share of the hospital market.

Private capital will boost healthcare sector growth, however risks exist alongside opportunities

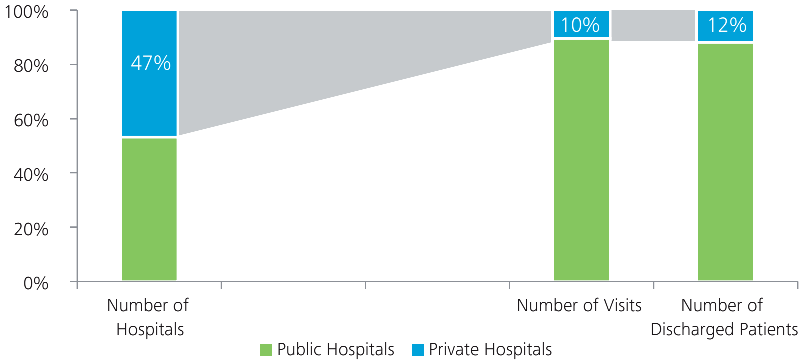
As govenment opens its doors to healthcare investment, private investors have rushed in to meet the high unmet demand. Riding the wave of this capital influx, private hospitals are making improvements in process management, human resources, and medical equipment and supplies, building their reputation and service scope.

Figure 4: Number of Private Hospitals in China



Source: Health Statistics Yearbook, Deloitte Analysis

Figure 5: Public and Private Hospitals by Quantity and Service Volume

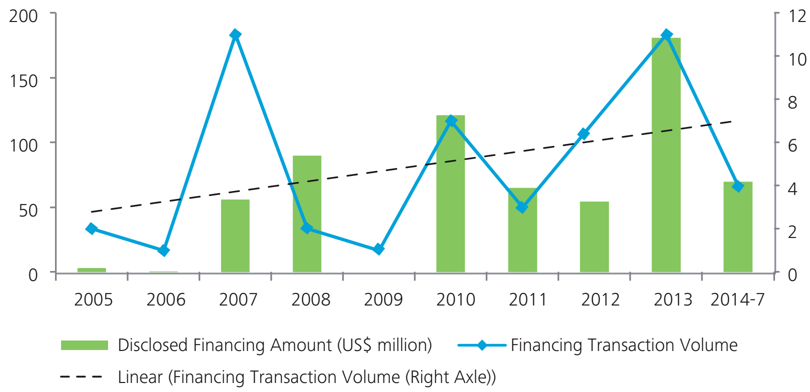


Source: Health Statistics Yearbook, Deloitte Analysis

- **Investors Favor Hospitals and Hospital-management Institutions**

Venture capital and private equity institutions (VC/PE) have been heavily investing in the Chinese healthcare market over the last few years. From January 2013 to July 2014, the VC/PE financing transaction volume and disclosed transaction amount have accounted for 27% and 39% respectively of those in the past decade and reached 15 deals totaling US$ 250 million. Specialized hospitals feature in the investing spotlight, accounting for 84% of the total hospital VC/PE financing volume in the past 10 years. CDH, for instance, has invested in Angel Group (China) Holding Company, Evercare, New Century International Children's Hospital and Wenzhou Kangning Hospital; Sequoia Capital China has also invested in Angel Group (China) Holding Company, the International Recovery Medical Affiliated to Peking University and Lanjing Dental. The reasons for this trend are two-fold. First, most private hospitals are specialty hospitals, so there is more investment by way of numbers. Second, unlike general hospitals, which tend to be large and slow in turnover, specialized hospitals demand less investment and have a relatively shorter incubation period. In particular, chain specialty hospitals have been investment favorites as they tend to be more service-oriented and have stronger reproducibility and growth potential. On the other hand, general hospital groups with good historical performance, such as Beijing's Phoenix Healthcare and Shanghai Renji Medical, have also had their share of investment.

Figure 6: VC/PE Investment Amounts and Transaction Quantities in the Hospitals and Hospital Management Sectors



Source: ChinaVenture, Deloitte Analysis

- **Active Merger and Acquisition Activities in Healthcare**

As healthcare is widely expected to remain a leading growth sector in the near future, more and more companies are entering the market and expanding their hospital investments through various means, including acquisitions and joint ventures. Since 2013, a flurry of acquisition activity has been taking place, with both volume and value of acquisitions reaching record highs, accounting for 35% and 64% respectively of the sum of the past decade. The preponderance of buyers-65%-are pharmaceutical and medical device companies (Pharmaceutical companies accounts for 58%). The motives for this are clear: hospitals are a powerful sales channel in which to use their products, and help the companies become healthcare industrial conglomerates encompassing the entire value chain. Fosun Pharmaceutical, for example, acquired 60% stake in Tier 3A Chancheng Hospital in 2013, following its investments in United Family (a high-end private hospital) as well and three other private hospitals. Fosun Pharmaceutical has now accomplished an initial layout of its health care vision, featuring premium healthcare in the affluent coastal areas and lower-level hospitals in second- and third-tier cities, with an ambitious plan to cover 10,000 beds by 2015[5]. Gansu Duyiwei Biological Pharmaceutical Co., Ltd. has also acquired 7 hospitals in 2013 and 2014 and was renamed as Hengkang Medical Group Co., Ltd. at the end of 2013, with an intention of expanding its portfolio to encompass both the upstream and downstream playing fields of pharmaceuticals and health care provision.

The second major category of buyers in hospital acquisitions (23% of the total) come from outside the sector, attracted by possibilities for growth. The acquisition of BYBO DENTAL GROUP by Legend Holdings Ltd. Investments is an example of this second category of investment.

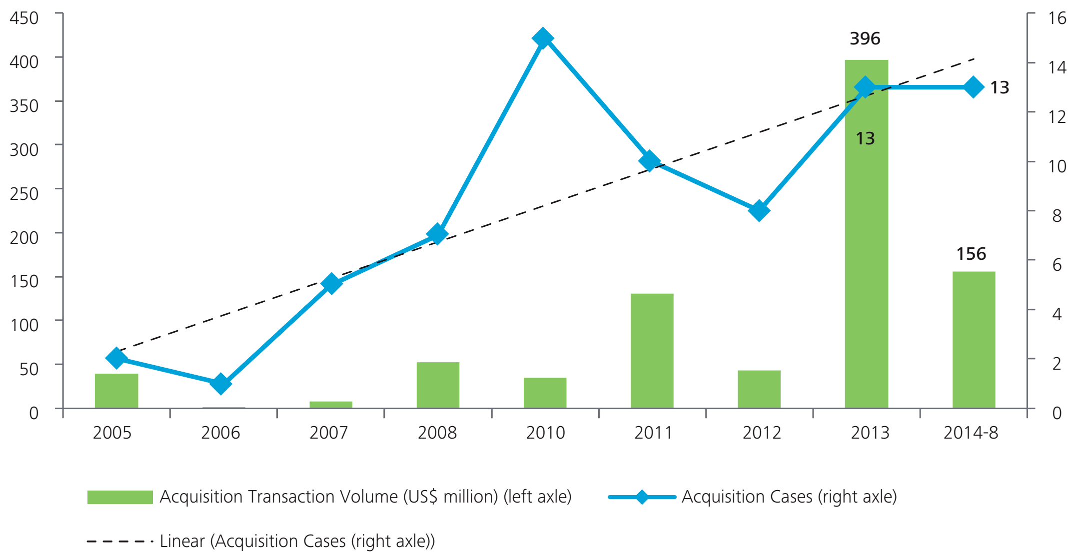
[5] China International Capital Corporation Limited

Table 2 Hospital Acquisition Transactions in 2013 and 2014

Date of Announcement	Acquirer	Target Company	Transaction Value (Million USD)	Stake Acquired
August 20, 2014	Hengkang Medical Group Co., Ltd.	Wafangdian Third Hospital	81.89	70.00%
June 16, 2014	Legend Holdings Ltd.	BYBO DENTAL GROUP	N/A	N/A
June 12, 2014	Beijing Tong Ren Tang Chinese Medicine Co., Ltd.	Fook Ming Tong	N/A	50.00%
May 9, 2014	Anhui Anke Biotechnology (Group) Co., Ltd.	Beijing Huimin	4.48	55.00%
May 9, 2014	Hengkang Medical Group Co., Ltd.	Ganxi Hospital	N/A	5.00%
May 9, 2014	Hengkang Medical Group Co., Ltd.	Ganxi Hospital	N/A	75.00%
March 17, 2014	Yongding Group Co., Ltd.	Yongding Medical	26.06	100.00%
March 17, 2014	Hengkang Medical Group Co., Ltd.	Liaoyu Hospital	20.82	100.00%
February 10, 2014	Hengkang Medical Group Co., Ltd.	Qionglai Welfare Hospital	9.77	100.00%
January 24, 2014	SHINVA MEDICAL INSTRUMENT CO., LTD.	Southeast Hand Surgery Hospital	0.57	55.00%
January 24, 2014	SHINVA MEDICAL INSTRUMENT CO., LTD.	Southeast Orthopedics Hospital	7.49	55.00%
January 21, 2014	China Resources Co., Ltd.	Mine Hospital	5.05	100.00%
January 1, 2014	Guangzhou Sungy Mobile Limited	Distinct HealthCare	N/A	N/A
November 4, 2013	Kangmei Pharmaceutical Co., Ltd.	Meihekou TCM Hospital	N/A	100.00%
November 4, 2013	Kangmei Pharmaceutical Co., Ltd.	Friendship Hospital	N/A	100.00%
November 4, 2013	Kangmei Pharmaceutical Co., Ltd.	Meihekou Maternal and Child Health Care Hospital	N/A	100.00%
October 16, 2013	Guizhou Bailing Group Pharmaceutical Co., Ltd.	Tianyuan Hospital	0.23	100.00%
October 15, 2013	Skyocean Investment Holding Co., Ltd.	Allied Overseas	194.92	74.52%
October 9, 2013	Shanghai Fosun Pharmaceutical (Group) Co., Ltd.	Chancheng Hospital	109.82	60.00%
July 1, 2013	Town Health International Investments Limited	Guangzhou Yikang	15.83	40.00%
June 27,2013	Gansu Duyiwei Biological Pharmaceutical Co., Ltd.	Pengxi Hospital	12.68	100.00%
June 6, 2013	Gansu Duyiwei Biological Pharmaceutical Co., Ltd.	Deyang Hospital	2.38	100.00%
June 1, 2013	Aier Eye Hospital Group Co., Ltd.	Guangming Hospital	5.96	100.00%
May 24, 2013	Wuxi Hongyi Real Estate Development Co., Ltd.	Wuxi Mingci Hospital	3.17	100.00%
April 16, 2013	Xinxiang Central Hospital	The East District Hospital of Xinxiang Central Hospital	28.99	80.00%
January 10, 2013	Gansu Duyiwei Biological Pharmaceutical Co., Ltd.	Center Medical Center	22.43	85.00%

Source: Public Information, Deloitte Analysis. Plus, programs listed in this table based on incomplete statistic, only for examples.

Figure 7: Hospital Acquisitions[6]



Source: ChinaVenture, Deloitte Analysis

Evidently, opportunities and risks coexist in hospital ventures, whether for portfolio expansion or pure returns. Among the success stories are Jinling Pharmaceutical, which performed a commendable and profitable turnaround of Suqian People's Hospital, and Tiantu Capital, which realized an 8-fold return on its investment in Phoenix Healthcare. On the other end of the spectrum is Huayuan Group, which acquired 5 hospitals in Xinxiang but was forced to pull out 3 years later, and SL PHARM, which sold its equity stock of the East District Hospital affiliated to Xinxiang Central Hospital. Being large entities, hospitals have high construction and operation costs and take a long time to break even. The success or failure of a venture is also highly dependent on the expertise of the health care team. Finance and internal control, process and management regulation are all issues which must be properly addressed. Thirdly, hospital management remains a nascent area in China, making day-to-day operation another challenge to expect post-investment. Finally, the concentrated involvement of the capital will surely lift up the hospitals' estimated values, which will add to the investment cost and risks. Therefore, thoughtful selection of opportunities remains extremely important to realize appealing returns.

[6] The larger amount of acquisitions in 2010 is largely influenced by Aier Ophthalmology's aggressive expansion of its chain outlets through acquisitions.

Hospital Management Becomes Increasingly Important

The heavy influx of investment capital has given the private hospital sector ample room to grow. At the same time, this growth must be supported by effective management. Hospital management is highly complex and specialized, and is further complicated in the Chinese case by sales rebates, opaque financial records, rigid drug procurement policy and price and regulatory risks. As investment increases in the healthcare market, effective hospital management will become more important than ever.

A few important aspects of hospital management must be considered. First, most current investors lack hospital management experience: the private equity groups, pharmaceutical conglomerates and non-healthcare groups that make up the majority of current investors do not have a background in hospital management. In an interview of major healthcare investors and industry insiders, Healthcare Executive (magzine) recommended that hospital management be contracted to a professional third party unless it is clear that the original team can operate effectively. Many investors follow this path: Phoenix Healthcare, for example, was entrusted with the management of public hospitals as a third party and realized a break-even timeframe of 4-5 years. Fosun Pharmaceutical, however, chose to entrust the management affairs of its newly acquired Zhongwu Hospital (located in Suqian) to the original management team. Second, strong corporate management skills must be built in order to realize a disciplined return on investment. Whether externalized or realized through a hospital's own development strategy, operational process standardization and quality management are extremely important, and can be improved dramatically with effective IT systems. Third, human resource recruitment and management must be done right. Shanghai Renji Medical, for instance, attaches importance not only to the recruitment and retention of high-performing talent, but also fosters medical professionals and values their efficient and effective use. One of their approaches is to have experts lead group-wide care teams. By doing so, the experts spread their workload, while sharing their expertise and contributing to skill development among group hospitals.

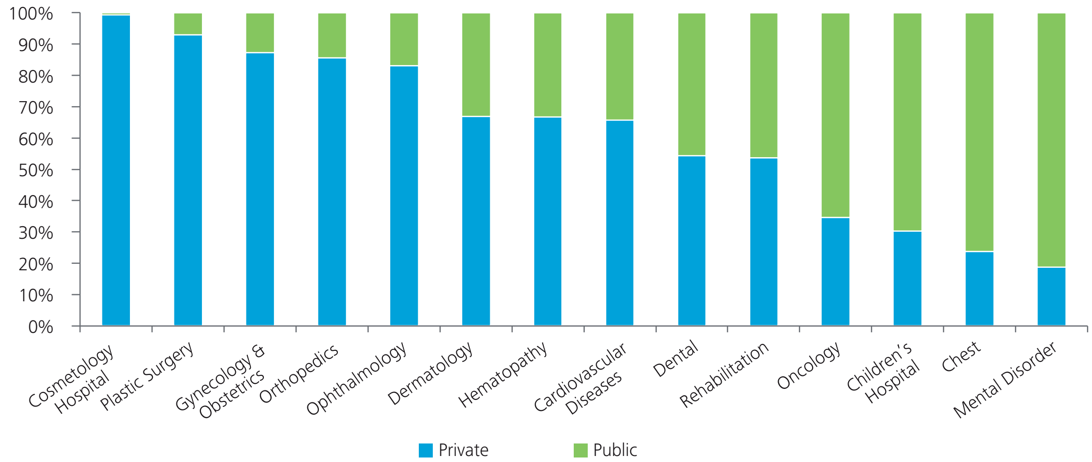
> I believe the real "spring" for Phoenix Healthcare will come in 3 to 5 years, when institutional investors and pharmaceutical companies have accomplished their preliminary expansions and started to consider the enhancement of hospital value. Hospital growth potential lies within management, which must include good strategy, processes, stringent cost control and effective leveraging of a hospital group entity, all of which Phoenix Healthcare can offer.
>
> Jiang Tianfan, Board Director and CFO, Phoenix Healthcare Group

> We are seeing a steady flow of capital into the healthcare industry. The next challenge is the recruitment of management talent. Hospital management is unique in that it demands professionals who have deep industry understanding and medical knowledge, and are able to integrate this knowledge with management science. It's not all about the money.
>
> Alan Hu, Audit Partner, Deloitte

"Feature Specialties" with Lower Entry Barriers Remain Favored in Hospital Development

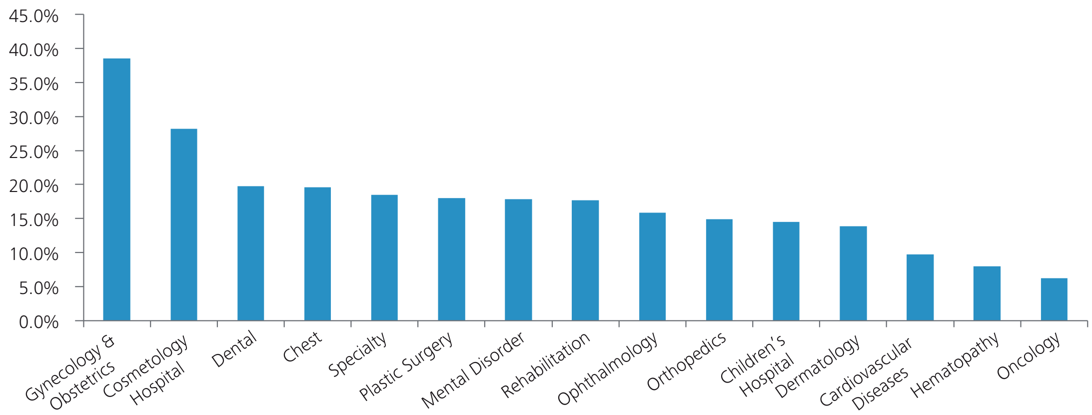
In the early years of scarce capital and talent, private hospitals were largely built as specialty hospitals, focusing on areas with low technical demand, lower clinical risk, faster return on investment and less availability in public hospitals. This strategy has helped these hospitals grow rapidly. Obstetrics and gynecology hospitals lead the pack, increasing more than twenty fold between 2003 and 2012 with a compound annual growth rate of 39%. Cosmetic surgery hospitals and dental hospitals have also enjoyed stunning growth rates of more than 18%. Rehabilitation hospitals, eye hospitals, orthopedics and children's hospitals have also shot up with double digit growth rates ranging between 14% - 17%. By year 2012, 62% of specialized hospitals nationwide were private. Private hospitals overall account for over 80% of cosmetic surgery, women's, orthopedics and eye hospitals, and over 60% of dermatology, hematology, cardiovascular, dental and rehabilitation hospitals. (FIgure 8-9)

Figure 8: Private to Public Hospital Ratio among Specialized Hospitals (2012)



Source: Health Statistics Yearbook, Deloitte Analysis

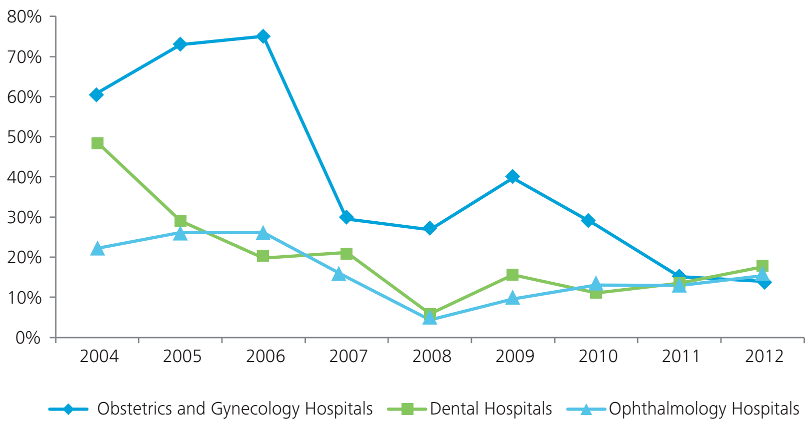
Figure 9: Compound Annual Growth Rates of Private Specialized Hospitals (2003 - 2012)



Source: Health Statistics Yearbook, Deloitte Analysis

Noticeably, some traditionally fast-growing specialties have slowed down in recent years. The annual growth rate of women's hospitals, for instance, slowed from 61% in 2004 to 14% in 2012; dental hospitals and eye hospitals have also seen a marked deceleration in their growth (see Figure10). As new entrants squeeze their way into these specialty areas, these markets are becoming increasingly saturated and investment will need to be diverted to new areas of exploration, including specialties with higher technical barriers to entry, general hospitals and high-end health care. This will be the focus of the next chapter.

Figure 10: Private Hospital Growth Rate, Selected Specialty Hospitals



Source: Health Statistics Yearbook, Deloitte Analysis

Hospitals Move to Leverage Scale

Under the new government policies, private capital investment is intended to encourage market competition and force public hospitals to improve their operational efficiency and service quality. In response, private hospitals will undoubtedly seek to leverage scale to compete with the more well-established public hospitals by virtue of higher quality and more efficient operation. Drug distribution, lab testing and quality control centers can be set up and large medical equipment shared to streamline administration and reduce expenditures; larger hospital groups can also leverage expanded bargaining power during procurement negotiations. Moreover, large networks may also foster public recognition, foster credibility and expand the market. However, leveraging scale is not just about increasing numbers. Management capability and strong intra-network synergy also play critical roles. Effective in-network referral, medical professional mobility and collaborative tele-diagnosis for complicated clinical cases are all ways to promote optimal use of network resources.

In the current environment, private hospitals have mainly leveraged scale in two ways. First, they form chains. Aier Ophthalmology, for instance, has set up over 70 eye hospitals in 24 provinces and municipalities around the country between 2003 and 2014, providing high-quality eye care in multiple acuity tiers through a business model known as the "three-pole chain". It is the first private Chinese medical institution to make an initial public offering. Second, they form comprehensive medical groups. Phoenix Healthcare, for instance, owning 12 hospitals and 28 community medical institutions through acquisitions and entrusted management, has created a comprehensive medical service system that integrates community health, preventive services and the diagnosis and treatment of more complex disease in Beijing. By way of conglomerate management, Phoenix enhances operational efficiency while managing to reduce the cost of drugs and medical equipment by leveraging its large scale in the bargaining process.

3.2 Development Strategy of Private Hospitals

Considerations in Strategic Positioning

When selecting a service area to enter the private hospital market, investors should consider the following factors:

- Level of Economic Development in Target Cities. The wealth of the local population, and their demand for medical services must be taken into account. For instance, if delivering premium healthcare, affluent cities like Beijing and Shanghai should be top of the list. As a result of this strategic consideration, most high-end hospitals are found in first-tier cities and do not attempt to extend far outside of this viable network.
- Local Medical Reform Policies. Cities vary widely in their implementation and promotion of medical reform policies, which affects the regulatory and competitive environment for private hospitals and makes market entry strategy extremely location-specific. Suqian City in Jiangsu Province, for example, became the first city where all medical institutions were privately run in 2003. Hospitals there must focus on how to gain an advantage in a relatively saturated market. In contrast, in cities where the regulatory environment remains in favor of public hospitals and public hospital reform is still underway, private capital has not been heavily involved. This therefore could be a promising point of market access.
- Preferential Tax Policies. Despite national support for private hospital development, there are much fewer preferential tax policies for private hospitals than their public counterparts. These policies are less comprehensive and forward-looking than expected, and lag behind private sector development (see Appendix). It is expected that the government will develop tax policies that will support private sector development, in line with its interest in fostering private capital involvement. Potential investors must therefore consider the tax burden under current policies while keeping an eye on upcoming changes when assessing investment opportunities.
- Local Supply and Demand. As proximity to home is an important factor in seeking healthcare, hospitals have service radius restrictions. Therefore, investors must consider the local disease profile and analyze market potential and supply of services within specific city regional geographies, and should favor those markets with unbalanced local supply and demand.
- Medical Service Portfolio. Investors must determine their service portfolio considering market options and growth prospects in various service lines. For instance, a specialized hospital demands relatively less investment and is simpler to operate. At the same time, lower barrier to entry and easier replicability might imply more competition and lower profit margins. In contrast, while general hospitals have a longer investment cycle, higher risk and greater difficulty in both operation and management, they are difficult to replicate and substitute. Given these considerations, investors should choose a suitable portfolio in consideration of their own abilities and investment objectives.
- Mode of Entry. Investors entering the hospital market can build from the ground up, acquire private hospitals, or acquire or take over the management rights of public hospitals. We will examine in detail the advantages, disadvantages and recent trends of these four models below.

Private Hospitals' Selection of Service Sectors

As mentioned earlier, private hospitals currently have lower overall capacity compared to their public counterparts. Therefore, they must position themselves in ways that differentiate themselves from public hospitals. Taking the above factors into account, and based on observation of the industry at present, we identify the following growth hotspots:

Premium Health Care

"Premium Health Care" refers to high-quality medical services tailored to an affluent demographic. According a 2011 Deloitte consumer survey, only 21% of consumers felt satisfied with the public medical system, and would opt for premium medical services if they had more money or more comprehensive medical insurance. As more people enter the middle class and have greater disposable income, and as commercial insurance develops, the domestic demand for premium health care services is set to rise quickly. In the meantime, to guarantee that the basic demands for medical services shall be met, the Government has proposed to restrict the supplied volume of premium "VIP" services within public hospitals[7], which will further widen the supply-and-demand gap in premium health care. Therefore, private hospitals will likely be able to sustain rapid growth in this sector. Moreover, we forecast three trends in premium health care.

- The spread of premium health care. In the past, premium services in China were primarily used by affluent foreigners or high net worth individuals such as entrepreneurs, senior executives, and businessmen, who were concentrated in Beijing and Shanghai. As wealth expands, premium healthcare is seeking new clients outside these traditional geographies. United Family Healthcare, for instance, which historically focused its operation in Beijing and Shanghai, has expanded its business in Wuxi, Guangzhou and Tianjin and plans to seek further expansion in other Tier 2 cities such as Chengdu and Qingdao.
- The transfer of some earlier favored specialty areas in the target groups of people served. In the past, as mentioned before, private hospitals have focused on specialties with relatively low barriers to entry. These specialties now realize high competition and low differentiation between service providers. Premium healthcare therefore gives an opportunity for private hospitals to further differentiate their positioning from both public hospitals and their private competitors. Hemei Medical, for instance, has moved its position from a mid-range women's healthcare provider to a premium women and children's healthcare destination.
- The rise of inbound medical tourism. Medical tourism is growing around the world, and consumers, while currently favoring countries like India and the Thailand for high quality service at low cost. China may become a source of in-bound medical tourism in the future, given the number of highly qualified medical professionals and abundant tourism resources.

[7] It is proposed in the Notice on the Work Arrangement of the Pilot Reform of the Public Hospitals (State Council, 2011) that VIP services rendered by the public hospitals should be kept under 10% of total services.

Case Study: HarMoniCare

HarMoniCare was founded by Mr. Lin Yumin in 2002, with the founding of the Shanxi Modern Women's Hospital the first specialized hospital for women in Taiyuan in Shanxi Province. The hospital was a pioneer in developing a service model for women's specialty hospitals in China. Over the next 10 years, the company expanded rapidly, establishing over 30 brand chain hospitals in both large and medium-size cities, including Beijing, Chongqing, Wuhan, Changsha, Guangzhou and Chengdu. Hemei has also established three brands: Modern Lady, Fair Lady and Hemei. The latter focuses on the high-end women and children, and is based in high-end cities such as Beijing and Shenzhen.

With a keen awareness of shifting policy landscape, deep understanding of local markets and outstanding operational capability, Hemei has realized great success through its continued expansion.

- Adopt different tactics of differentiated competition at different times. As quality medical professionals were scarce in the early years, Hemei initiated its operation in the mid-end range of women' s services, which was somewhat neglected by the large-scale hospitals yet held high demand. Hemei has conducted differentiated operation in terms of department segmentation, additional service items, featured decoration and implementation of innovative technologies with an effort to cover up its shortage of having fewer experts and techniques as comparable with those of the large-scale public hospitals. Later on, having accumulated a larger professional pool and with a favorable policy environment, the company oriented its direction towards high end care and established the Hemei Business Unit in 2009 to build up its premium Hemei brand.
- Attain first-mover advantage. Hemei brought in investing partners CDH and CCB International to accelerate expansion, setting up over 20 new hospitals in the past 6 years. This external capital is regulated carefully to lay a foundation for future public offering aspirations. Hemei is also looking into an overseas red-chip structure.
- Retain institutional memory through talent retention, standardize hospital operation and ensure service quality and safety. Hemei' s hospitals are run by experienced general managers, chosen from among the ranks of long-serving employees who worked their way up from basic positions in the company. Within Hemei, functional departments exist for quality and safety that function to share medical techniques between hospital branches, ensuring services are replicable within the group network. The company has a strong emphasis on quality improvement, establishing a partnership with Harvard' s Partners Healthcare International and obtaining JCI certification, one of the few Chinese hospitals to do so.

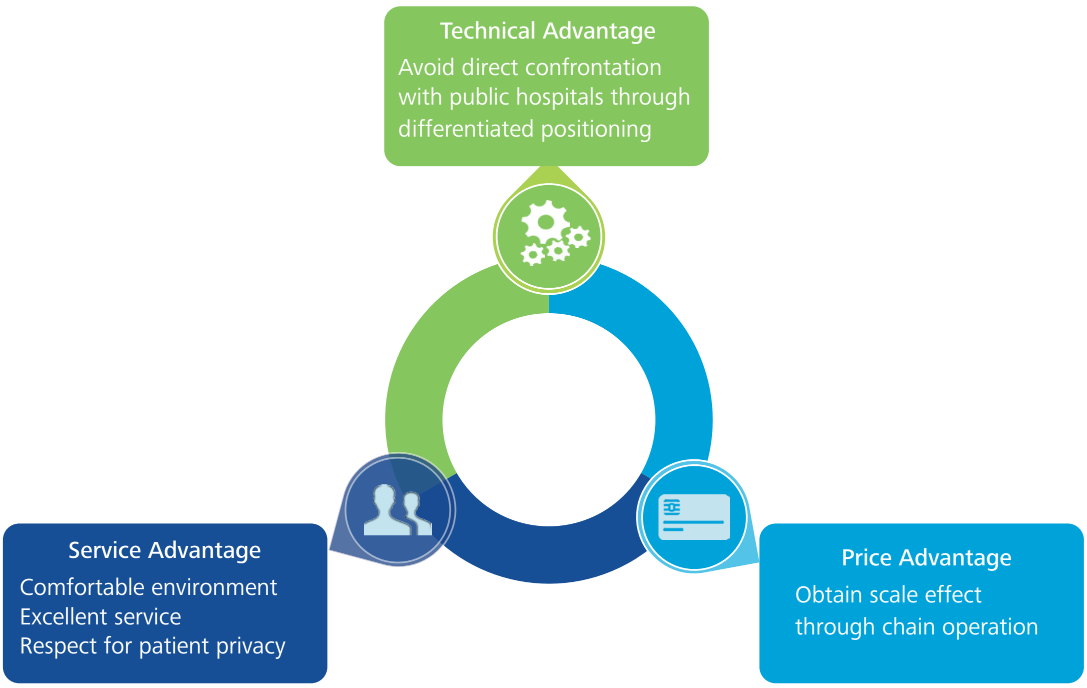
Chain Specialty Hospitals

Specialty hospitals as a sector have seen the fastest growth of private capital investment. According to the Health Statistics Yearbook, in 2012, there were 1,760 private hospitals in China, which indicates a compound annual growth rate of 19% over the past decade. Compared to general hospitals, specialized hospitals have lower barriers to entry thanks to smaller investment costs and a smaller range of required technical capabilities for operation. Talent recruitment, development and brand building are also simpler and more focused. Specialized hospitals also largely avoid direct competition with public hospitals given their differentiated service offerings. Due to these reasons, specialized hospitals are faster to build and generally more profitable, attracting private capital that has developed exemplary chains such as Aier Ophthalmology, ARRAIL Dental and TC Medical. As more investment enters this sector it is important to consider the following in hospital strategy.

- Chain Specialty Hospitals with Highly Replicable Services

  While it is difficult to compete with public hospitals on comprehensiveness alone, private hospitals may gain competitive advantage in service and price point. Consumers are willing to pay premium for quality services. Delivering premium-quality will therefore allow private hospitals to charge premium prices, therefore avoiding the bottleneck presented by waiting for inclusion in thrifty medical insurance listings. Meanwhile, specialization allows private hospitals to become excellent at their focused set of offerings. Thus lower prices, or higher quality service at the same price, can be realized through effective cost control and larger scale. Smaller scope, chain operation and steady and fast expansion capabilities therefore are the cornerstone of the success of specialized hospitals. Healthcare will continue to specialize, and specialties offering lower risk, having more attention to service and are more replicable will continue to be hot spots for investment.

Figure 11: Gain Competitive Advantage through Differentiation



Source: Deloitte Analysis

Attention should also be focused on specialties that are more dependent on high-tech devices, and thereby may reduce the number of highly trained physicians needed for the field. Aier Ophthalmology, for instance, which uses excimer laser technology, has expanded to 70 clinics in ten years; Concord Medical Services Holdings Limited has set up 140 radiation therapy and imaging centers in 55 cities around the country. These specialized chains bring their own competitive advantages in skill and talent. Rapid expansion also allows them to leverage scale and branding. As medical technology develops, medical devices will have even greater functionality and will support the development of many new players in this arena.

- Specialties with Higher Barrier to Entry

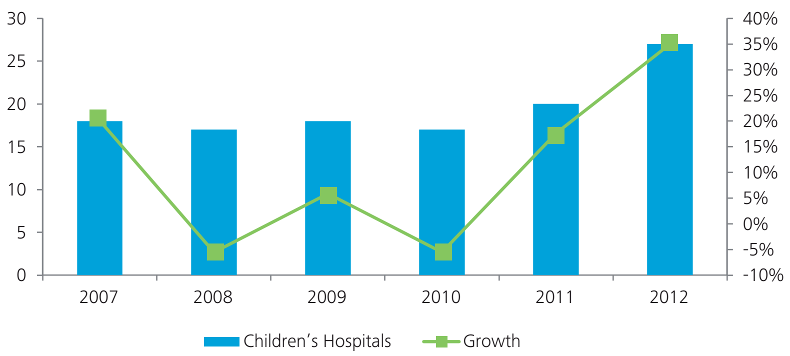
Specialties differ in their development opportunities in different times. While obstetrics and gynecology hospitals, dental hospitals and eye hospitals have attracted investment and developed rapidly over the past 10 years due to their low barriers to entry, these markets are becoming saturated over time. As private hospitals improve in skill, therefore, these previously prohibitive areas will become the new feature investment hot spots. The development of children's hospitals, for example, have somewhat accelerated in recent years (see Table 3 and Figure 12). In the long run, with the further implementation of health reform in China, especially as medical professionals become more mobile, private hospitals will be able to enter specialty areas, such as orthopedics, oncology and neurology, which are currently noted for high human resource barriers.

Table 3: Analysis of the Competitive Advantage of Children's Hospitals

Supply	• There are only 89 children's hospitals in China, including 62 public hospitals and 27 private hospitals. • The Department of Pediatrics appears to be dwindling in the public general hospitals. - **Longer clinic visits:** Clinic turnaround is slow given the longer time it takes to see a child, given they cannot easily describe their symptoms and lack of cooperation with examination and testing - **Difficulty managing doctor-patient relationship:** Malpractice risk is high given parents' protectiveness over child welfare - **Dwindling supply of pediatricians:** New medical graduates are more reluctant to enter pediatrics due to low perceived esteem among their peers and lower compensation
Demand	• Children are the center of most Chinese families. According to the National Bureau of Statistics, in 2013, China's population between ages 0 and 14 was 238 million. • Long wait times and overnight lineups to obtain appointments remain a widespread issue
Development Trends	• Revenue has grown at a CAGR of 20.4% over the past 5 years; profit was 5.6% in 2012. • The expansion of children's hospitals began to accelerate in 2011 (18%) and 2012 (35%) (see Figure 12)
Case	• CDH has conducted phase A investment in New Century International Children's Hospital. The investment has been expanded from 1 hospital to 3 hospitals in operation and 3 more under construction

Source: Deloitte Analysis

Figure12: Children's Hospitals in China



Source: Health Statistics Yearbook, Deloitte Analysis

General Hospitals

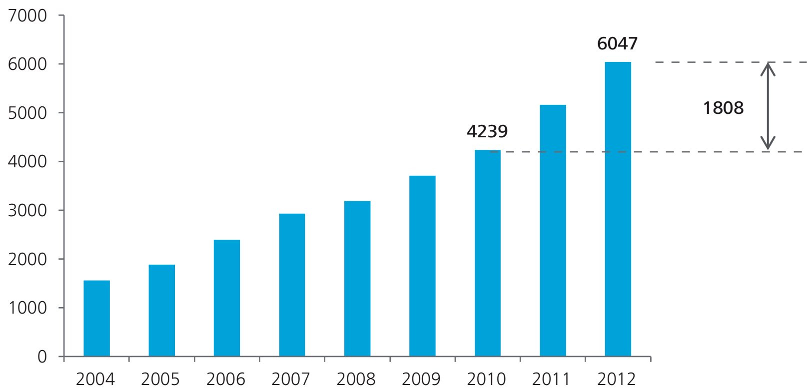
With comprehensive specialty coverage, high demand for medical personnel and high investment costs, general hospitals position themselves to serve the general population. As they are obliged to satisfy public demand, they are highly dependent upon medical insurance and are direct competitors to general hospitals. Private general hospitals have therefore adopted the strategy of being general hospitals with feature specialties, so as to merge the scale advantages of general hospitals with the operational advantages of specialized hospitals.

General hospitals will become another hot spot for investment. The primary reason is that supply and demand remain extremely unbalanced, both in overall quantity and in location. Many locales remain under-serviced and provide good investment opportunities. Furthermore, state policy is favoring the development of general hospitals: During the executive meeting of the State Council in September 2014, construction of general hospitals was given top priority to help "fill in the gaps" in healthcare services for 2014 and 2015. The meeting also proposed attracting more private capital to expedite these projects. In addition to national support, city-level policies have also opened doors for private hospitals. In Beijing, for example, since the lift of the cap on multiple-site medical practice early in 2014, the city also removed the requirement for individual approval on multi-site practice by an administrative board. These new regulations will help shift existing public resources into private hospitals, allowing increased numbers of recognized practitioners to lend their name to private institutions and strengthen their esteem. Moreover, private hospitals will find it easier to be included on designated medical insurance lists, increasing accessibility of private hospital treatment to those for whom it was previously a barrier due to coverage issues.

Compared to specialty hospitals, general hospitals tend to have higher requirements on fund, talent and management, making it difficult to duplicate. However, established general hospitals can become local institutions, giving first-mover advantages to those that set up early. As a result capital investment has been warming toward general hospitals as investors seek to gain market share - According to the Health Statistics Yearbook in 2012, of the 6,047 private hospitals in China, 1,808 (30%) were built in the two years prior.

Given First-Mover Advantages of Involvement in the General Hospitals, the Capital from Various Sources Rush to Establish Layout in the General Medical Service Sector

Figure 13: Number of Private General Hospitals



Source: Health Statistics Yearbook, Deloitte Analysis

Table 4: General Hospital Investments

Investor	Invested Hospital	Hospital Nature	Investment Mode
Phoenix Healthcare	Beijing Jiangong Hospital	General Hospital	Acquisition
	11 hospitals, including Beijing Yanhua Hospital and Beijing Mentougou District Hospital	General Hospital	Entrusted Management
Shanghai Renji Medical	More than 20 Hospitals (Mostly the General Hospitals)	General Hospital	Greenfield, Entrusted Management, Acquisition
Fosun Pharmaceutical	United Family Healthcare	High-End Health Care	Indirect Equity Holding
	Anhui Jimin Cancer Hospital, Guangzhou Nanyang Tumour Hospital	Specialized Hospital	Acquisition
	Yueyang Guangji Hospital of Hunan, Suqian Zhongwu Hospital of Jiangsu and Chancheng District Central Hospital of Foshan City	General Hospital	Acquisition
	Taizhou Municipal Zanyang Hospital and Taizhou Municipal Zanyang Health Center	General Hospital	Greenfield
Xinbang Pharmaceutical	Guizhou Cancer Hospital	Specialized Hospital	Acquisition
	Anshun Hospital of Guizhou Province, Affiliated Affiliated Hospital of Guiyang Medical College and Affiliated Wudang Hospital of Guiyang Medical College	General Hospital	Acquisition
Kaiyuan Investment	Xi'An Gaoxin Hospital	General Hospital	Acquisition
	Xi'An Sheng'An Hospital	General Hospital	Greenfield
Jinling Pharmaceutical	Suqian Peoples' Hospital	General Hospital	Acquisition
	Yizheng Hospital of Nanjing Drum Tower Hospital Group	General Hospital	Acquisition
HR Pharmaceutical	Kunming Children's Hospital of Yunnan Province, Guangdong 999 Brain Hospital	Specialized Hospital	Acquisition
	General Hospital of Wuhan Iron & Steel Company	General Hospital	Acquisition
Sinopharm	Xinxiang Central Hospital, Second People's Hospital of Xinxiang and Third People's Hospital of Xinxiang	General Hospital	Acquisition
	Xinxiang Maternal and Child Health Care Hospital and Xinxiang Traditional Chinese Medicine Hospital	Specialized Hospital	Acquisition
Sunshine Life	Sunshine Union Hospital	General Hospital	Greenfield

Source: Healthcare Executives, Deloitte Analysis

Case Study: Phoenix Healthcare Group

Phoenix Healthcare is China's largest private hospital group. Based in Beijing, Phoenix Healthcare runs 11 general hospitals, 1 traditional Chinese medicine (TCM) hospital, 1 women and children's hospital and 28 community clinics. Of its holdings, Phoenix Healthcare owns one hospital (Beijing Jiangong Hospital, where 80% of the equity stock is held by Phoenix), and the rest are kept under entrusted management. Within this medical group, a comprehensive medical service system has taken shape, from community health and preventive care to the diagnosis and treatment of complex illness. Phoenix Healthcare went public in Hong Kong in November 2013. As the first domestic medical operator listed in the international capital market, Phoenix Healthcare listed at 24 times its expected earnings, earning a record oversubscription of 534 times its quota. Phoenix Healthcare has attracted attention not only due to its sound reform concepts, but also because of its solid performance in reforming public hospitals. During the first half of 2014, the company's revenue grew by 20.8% to RMB 507m year on year. Profit distributable to shareholders increased by 63.6% to RMB 82m during the same period.

Phoenix Healthcare's business model has served as a reference model for investors looking to get involved in public hospital reform. The company's revenues mainly come from three sources: Clinical service provision, supply chain, and hospital management. Service provision income mainly arises from the profit from Beijing Jiangong Hospital, in which Phoenix Healthcare is a majority shareholder. In the first half of 2014, service provision income accounted for 48.8% of the total, making it one of the company's key revenue streams. In the same period, supply chain revenue accounted for 47.9% of the total. Phoenix Healthcare's supply chain business ranges from medical devices to medical consumables and pharmaceuticals, through its subsidiaries. Leveraging its vast Beijing clinic network, Phoenix drives down purchase price in procurement, profiting from its internal efficiencies. Finally, Phoenix gains income through management fees. By way of management and capital export, Phoenix Healthcare can operate and manage its hospitals without involving property ownership issues, which helps Phoenix circumvent the difficulty of profit distribution from public hospitals. This way of operation allows the company to strengthen its control over its supply of medical consumables, medical devices and pharmaceuticals. Although management fees accounted for a mere 3.3% of total revenue in the first half of 2014, the channel offers a fast and cost-effective way for the company to build up hospital networks and positions the company to quickly acquire target hospitals when appropriate.

Some factors behind Phoenix Healthcare's success:

- Seizing opportunities presented by health reform. Initially, Phoenix Healthcare's performance was lukewarm because it was mainly engaged in building new hospitals, its operating and managing capability was nascent and immature, making it difficult to compete with the human resources and technical capabilities of public hospitals. When it became clear that the payback term for these hospitals would be longer than originally forecasted, the Company gradually withdrew from property ownership. After 2000, Phoenix Healthcare understood the need to become involved in public hospital reform, and by getting involved in entrusted management and acquisition, it has since rapidly built up its service network.
- Entering the market using diversified strategies. By establishing its hospital network through both entrusted management and acquisition, the Company has avoided property ownership problems and public-private hospital legal differentiation. By diversifying its holdings to encompass the entire healthcare value chain, Phoenix can also capitalize on the leverage that this diversification offers.
- Consolidating resources through capital operation. The Company has realized the capital listing on the basis of the share reform, which has laid a foundation for the consolidation of the industrial and financial resources in preparation for later enlargement of the Group's business scale.
- Applying a standard management system and sharing resources between group hospitals. For example, the group employs professional hospital managers, and uses advanced IT and management systems to help replicate the hospital group's culture among new entrants. By sharing experts between group hospitals, skills are better transferred, improving the quality of diagnosis and treatment qualities.

Case Study: Renji Medical Investment Co., Ltd.

Shanghai Renji Medical Group was founded in 2003 by Renji Hospital, an affiliate of Shanghai Jiaotong University. It is a limited liability joint-stock company for hospital management and operation, founded in part with private investment. In the past 10 years, the Group has expanded rapidly and currently runs more than 20 Grade-II and III hospitals, achieving strong performance within these operations. For instance, in 2004, Zhejiang Province's Cangnan County government entrusted Renji with the management of People's Hospital of Cangnan County, which was upgraded from Grade II-B to III-B, with business revenue growing from RMB 45 million to RMB 520 million after entrusted management. Suzhou Yongding Hospital, built with financing by Jiangsu Etern Company Ltd., also saw a 50% uplift in its key performance indicators one year after handover of management to Renji Medical.

Thanks to Shanghai Renji Hospital's strong technical know-how, brand advantage, state-of-the-art hospital management system, flexible business models and sound understanding of the policy environment, Renji Medical has been expanding steadily and quickly.

- Capitalize on Renji Hospital's talent, techniques and brand. A Grade III-A general hospital with a 170-year history, Renji Hospital is a clinical, education and research powerhouse with national recognition. Renji Medical capitalizes on Renji Hospital's reputation and talent – by consolidating Renji Hospital's technical resources, Renji Medical can replicate its success to hospitals under its entrusted management. This is done through resident physician rotations in subsidiaries, attending physician visits and inter-hospital medical consultations. Renji Hospital's experts are also placed at the head of group-wide medical teams, encouraging local hospitals to share and duplicate the techniques given to them from the tertiary center. Finally, Renji has emphasized brand promotion within subsidiary hospitals to foster recognition and trust.
- Ensure growth by using a standardized hospital management system. Hospital operations are complicated and specialized and require expert, professional management to realize results after acquisition. Renji Medical combines international experience with its own local experience to develop professional and commercial management products, and uses these systems within the daily operational practice of its member hospitals. Within its hospitals, Renji Medical emphasizes its value system, called "2+1", in which 2 fundamentals of medical expertise (treating common illnesses and while striving for improvement in technique and service) are combined with 1 medical ethics principle of patient welfare. While building medical capacity, Renji Medical seeks to tailor the service offerings of each hospital in consideration of each hospital's strengths and opportunities, and has become known for its hospitals' unique "feature specialties".
- Use flexible business models to foster rapid expansion. Renji Medical has engaged its group hospitals through multiple ways including entrusted management, acquisition, equity sharing and establishing greenfield hospitals, building a large network in the Yangtze River Delta and East China. Its group hospitals include both general and specialized hospitals, with decisions regarding targets made on the basis of local supply and demand, competition and the hospital's expertise. Renji Medical then customizes its management model to each target medical institution and the local policy environment.
- Seize opportunities presented by reform policies. In earlier years, entrusted management was the primary way of entering the health service sector. As the market opened, Renji's position as an expert in entrusted management gave it leverage to expand its focus to establishing new hospitals, with its current target being building 5 to 8 hospitals, totaling 60,000 beds, within the next 3 to 5 years.

Health Services

As China develops, its people are growing more aware of their healthcare needs, demanding more preventive care and a greater diversity of services. In acknowledgement of these changes, the State Council issued the Opinions on Promoting the Development of the Health Care Industry in November 2013, in which the concept of a health care industry was proposed for the first time in state literature. The Opinions described a healthcare service industry as being composed of diverse areas including medical services, rehabilitation, health promotion, and nutrition, and declared that the tasks moving forward are to promote this diversification, in particular fostering geriatric care and traditional Chinese medicine. Heath care is different from medical care in that it could include pre-hospital care such as health consultation and post-hospital care such as rehabilitation and chronic disease management. When compared with inpatient services, these areas have lower technical barriers and less capital requirement for start-up, while they have a potential to offer a substantial service offering not readily available in large tertiary hospitals. Given these characteristics, these categories are expected to flourish with policy support. The major current barrier is the lack of insurance coverage for many of these services. As commercial insurance expands, however, we do expect this point to be changed over time and the market expanded.

> With respect to providers, traditional brick-and-mortar providers can take advantage of WeChat and other web platforms to promote services to consumers, improving use of health data management and improving the rate of successful secondary sales.
>
> Yvonne Wu, National Industry Leader,
> Deloitte China Life Sciences & Health Care

Mode of Entry of Hospital Investment

Investors have entered hospitals mainly in four ways: through greenfield construction, acquisition of private hospitals, or acquisition or entrusted management of public hospitals. It must be remembered that these strategies each have advantages and disadvantages, and investors should make comprehensive evaluations in consideration of their own abilities and goals. Companies that operate as conglomerates should consider the diversified investment modes in attainment of stable expansions.

- Acquiring Private Hospitals. As a common strategy, buyers can improve the acquisition's operational efficiency by injecting funds, management talent, technology or brand. Development periods are generally shorter and often the original management team is preserved. On the other hand, hospitals acquired in this way often have historical operating problems and thus may have difficulty in delivering on the investor's goals. The private hospital acquisition landscape is also extremely competitive nowadays, which has driven up valuations.
- Third-Party Management of Public Hospitals. Since the introduction of new medical reform policies, local governments have been exploring ways to run public hospitals with multiple stakeholder involvement. Entrusted management therefore offers an effective way of splitting the ownership and management right of hospitals, while allowing the management company to earn a fee and a share of the profit. Since the hospitals' ownership is not involved in management, regulatory risks are reduced for the owners, while the model serves as a transitional phase to help test the waters for eventual withdrawal of state capital entirely. At the same time, private capital may help address such issues as standing debt, facility upgrade and alleviating financial pressure from local government.

From the perspective of the management company, the entrusted hospital is already established from an insurance and medical staff perspective, meaning turnaround time and risks are less than building a hospital greenfield. Therefore, entrusted management is another commonly used channel through which private capital may enter general hospitals. Phoenix Healthcare, which made an initial public offering in 2013, is a relatively mature example of entrusted management. Of course, due to the conservative attitude of the government, public hospitals so entrusted are mostly those with poor performance and relatively weaker reputation and therefore place higher demands on the entrusted manager. Meanwhile, most hospitals tend to demand that many aspects of the current hospital be retained, such as job security for current employees, and the hospital's core offerings. Therefore, the entrusted manager may face an institutional ceiling while introducing new management methods. Additionally, an entrustment contract is time-limited, meaning the manager faces the risk of the contract not being renewed.

- Acquiring Public Hospitals. Public hospitals are attractive acquisition targets due to their existing medical professional resources and high public standing. The challenge is the government's extremely conservative attitude towards ownership change, while the regulations remain hazy as to how private capital should be involved. Hence, reform progress is very slow. From the investor's perspective, there are many challenges in acquisition: Public hospitals have very opaque financial systems, making it difficult to accurately value potential targets. Acquisition negotiations also tend to be long and have a high chance of failure. Next, any realized profit from public hospitals must be used only for internal investment according to current law, making profit distribution a difficult point for investors to work around. If a not-for-profit hospital is made for-profit, the hospital becomes exposed to two aspects of risk. One is that the State is unclear on its stance towards such transformation[8], so there is uncertainty in the policies currently available; the other is that the switch will cause the hospital to lose some benefits, such as policy subsidies and public entity tax exemptions, reducing the hospital's profitability. Finally, hospitals currently given to private owners are generally burdened with poor operation accumulated through time. Meanwhile, investors must deal with other issues, such as talent retention in the face of declining social standing with private ownership.
- Greenfield hospital establishment. In comparison with the prior three strategies, establishing a new hospital requires a longer turnaround time to account for permits and construction time, a higher upfront investment, a longer cycle to realize positive returns and, consequently, higher risks. However, the advantage lies in the fact that a newly established hospital has no historical baggage, giving the investor more control over operations. With gradually increasing policy support for private hospitals, private capital will enter general hospitals increasingly through greenfield building.

[8] It is stipulated in Document No. 58 that not-for-profit medical institutions run by private capital should not be transformed into profit-making institutions and those that prove to be so transformed will be subject to approval by the original authorities with the relevant formalities to be handled accordingly.

Table 5: Comparison of Investment Strategies

	Acquisition of the Private Hospitals	Entrusted Management of the Public Hospitals	Acquisition of the Public Hospitals	Establishment of New Hospitals
• Entry Barrier	Low	Low as no property rights involved	Long negotiation process, higher risk of negotiation failure	Long process of approval and construction
• Pre-Stage Investment	High	Low	High	High
• Property Right Involvement	Yes	No	Ambiguous	Yes
• Fostering Cycle	Short	Short	Short	Long
• Operational Difficulty	Hospitals have historical operational problems. Medical talent and public esteem are inferior to those of public hospitals	Institutional resistance to reform will be encountered	Institutional resistance to reform will be encountered	Relatively Standard
• Potential Return on Investment	High	Moderate – management fees and potential share of profit	Moderate - ambiguities in both the property rights and hospital public/private status	High
• Case	Hongyi Capital's acquisition of Yangsi Hospital through Honghe Medical	Beijing Yanhua Hospital Entrusted to Phoenix Healthcare	Phoenix Healthcare's acquisition of Beijing Jiangong Hospital	Renji Medical's new Changshu Southeast Hospital

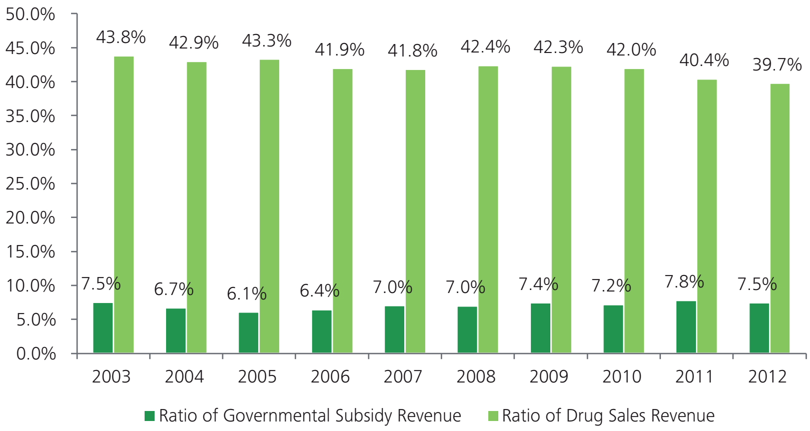
Source: Deloitte Analysis

Public Hospitals and Community Clinics: Strengthen Core Capacities to Improve Service Quality, Efficiency and Availability

4.1 Development Issues Facing Public Hospitals

The State Council currently ranks public hospital reform as number one on its list of key reform priorities[9]. In Key Tasks of Deepening the Reform of the Medical System in 2014, the State Council mentions the plan to undertake urban and rural hospital reform simultaneously, establishing 700 new experimental sites in the public hospitals at county level, increasing the number of experimental sites to cover 50% of all counties. It also requires one pilot reform city established in each province in 2014. Medical reforms have been pushing hospitals towards the market, while reducing hospital revenue. Public hospitals will, as a result, face a series of daunting challenges as medical reform progresses.

Figure 14: Financial Subsidies and Drug Revenue as Percent of Total Hospital Revenue



Source: Health Statistics Yearbook, Deloitte Analysis

- The removal of drug mark-ups will force public hospitals to overhaul their revenue streams. A centerpiece of hospital reform, the government is looking to re-structure hospital compensation in a way that will re-align their mission to the public welfare above profit. After zero mark-up is implemented, hospitals will lose the largest of their revenue streams: in 2012 drug revenue made up 39.7% of total income, while government subsidies accounted for a mere 7.5%[10]. The lost income will be somewhat compensated by cost cuts and provincial and national subsidies, although the impact of these subsidies will not be very significant. The best hope is increasing service fees, which are currently grossly undervalued. By doing so, hospitals can signal their belief in the value of their medical professionals while increasing their revenue. Hospitals may also encourage the use of high-technology services in the plan to increase medical service use.
- Payment reform will force public hospitals to improve operational efficiency and reduce costs. As zero mark-up is implemented nationwide, insurance payments will become the main revenue source for public hospitals, and government policies and payment reform will continue to try and keep fee inflation under control. Local governments have contributed to this process by volunteering to carry out insurance payment pilots. Beijing, for instance, has already piloted capitation and diagnosis-related group (DRG) payment schemes and is discussing the results. These cost-cutting reforms help to shift incentives from test and treatment inflation towards efficient resource use.

[9] Key Tasks of Deepening the Reform of the Medical System in 2014, General Office of the State Council, 2014
[10] China Statistics Yearbook 2012

- Under these reforms, public hospitals may see outflows of both talent and patients. Private hospitals have flourished in the past 5 years, with an annual growth rate of 14% and bed growth rate of 21%. Although still relatively less competitive, private hospitals are becoming increasingly capable and formidable alternatives to public hospitals, particularly as medical professionals are allowed to move freely between institutions. While the majority of the Chinese medical professionals remain in public hospitals and the most senior qualifications remain concentrated in III-A hospitals, this is set to change with policy reforms.

> Public hospital reform cannot be achieved overnight; it requires sustained effort in two main directions. First is external environment reform, which requires top-level design and planning through cooperation and between government, civil society and health system players. Second is internal reform. Under the current impetus of health reform, public hospitals must re-orient their missions towards the public service goal of saving lives.
>
> Zhang Chongyu, Vice Chief Physician, Shanghai Ruijin Hospita

4.2 Countermeasures Taken by Public Hospitals

Public hospitals currently interweave management with operation, and administration with institution. As a result, managers, who are also medical professionals, lack the initiative to make changes and improvements. The government currently acts as both the hospital operator and the hospital regulatory agency. This conflict of interest may be leading to less than optimal operational efficiency. As reform moves forward, rational governance, ownership and administrative authority will feature prominently in reform priorities. Public hospitals in China hold a leading position in terms of brand, technology and talent. However this does not guarantee continued success – resource consolidation and business management skills are necessary to enhance a hospital's competitive strength, to optimize their business presence in an increasingly market-oriented health care sector.

Reform the Performance Management System

Despite the many years of medical reform, many public hospitals still carry out the old performance management system without accounting for distribution of labor, let alone consider the establishment of any detailed performance management system or establishing indices in line with an institution's visions and objectives. The biggest competition in the health care market is undoubtedly the competition for talent. An effective performance management system rewards high performers while identifying low performers early on. Public hospitals are expected to establish their own performance assessment systems to maintain competitiveness in an ever-increasing market.

Public hospitals should work out an effective performance management system on the basis of the four key factors below:

- Performance management must be guided by hospital strategy. That includes the strategic vision, supervision and organizational structure. When designing such a system, the organization must first establish its vision, strategies, and objectives. Next, the roles that the management and the organization will play monitoring transformation management will also be critical for consideration, as well as the reporting structure and specific responsibilities within management.
- Performance management is a system, which transfers the organizational strategies into workable performance management. That may include balanced scorecards and performance indexes. A comprehensive balanced scorecard needs to cover such various aspects as operational efficiency, financial performance, quality, and patient satisfaction, while staying consistent to the organization's strategy. The indices must also be clearly defined, measurable and reasonable for measurement.
- An organization's management capacity is foundational for performance improvement. That includes the staff's management expertise (whether through experience or formal training); professional development (whether the organization makes an investment their employees and offers them the training and development opportunities); available processes (how incidents are reported and tracked, how promotion opportunities are handled and how challenges are met). Management capacity also covers the IT system (whether the existing system is capable of data management and reporting) and communication (how the information is transmitted through internal and external communication channels).
- Organizational culture and interpersonal relationships are critical to the maintenance of the performance management system. Organization buy-in, leadership and incentives in particular are key considerations for hospital managers: how to engage staff at all levels, how to motivate staff to engage in their own development and if there are any suitable incentive and reward mechanisms available within the organization.

In a hospital, common understanding should be achieved in terms of the goals, objectives, and strategy before setting up performance indices. While establishing the performance assessment system for a prominent III-A hospital in Beijing, Deloitte Consulting discovered that the employees had highly variable, generally weak understanding of the hospital's vision and strategic direction. Deloitte therefore worked with the hospital leadership to identify the three most important mission-related messages and communicate this message to staff members. Once it was clear that the goals were understood, the performance assessment system was developed to meet the following goals:

- Align with the hospital's vision and strategic targets;
- Highlight the 3 to 6 most critical indices and evaluate these objectively with reliable data;
- Use diverse evaluation methods to measure team performance;
- Emphasize communication within and between teams and departments;
- Recognize team performance and commend individuals and teams with exceptional performance, give timely feedback and make publicly available the performance scorecards of employees, teams and the organization;
- Use fair, objective and transparent incentives and deliver them consistently; and
- Keep employees informed on the performance and assessment standards, manage employee expectations, allow employees to voice their concerns and continually improve the system based on feedback.

Improve Patient Experience

In Deloitte's 2011 China Medical Services Survey, patients felt that there was considerable room for public hospitals to improve on service quality. 47% surveyed thought that public hospitals are not patient-centered in their care; 45% thought wait times were too long and 32% thought the currently available services do not meet their needs. As technology improves, private hospitals grow in scale and the public increases and diversifies their demand for medical services, public hospitals will see a disappearance of technological barriers, private hospitals as stronger competitors, and the inability to match their service level to patient demand. To prevent this future loss of patient flow and maintain their market position, public hospitals must address their weakness in service quality by becoming more patient-centered in their care and improve the patient perception of quality.

Improving patient experience requires a comprehensive design process. Patient experience encompasses the patient's satisfaction during the entire visit at the hospital, from entry to exit, from admission to discharge. While many believe that patient experience is the sole responsibility of doctors and nurses, in reality each staff member is a contributor, from the switchboard operator to the security guards, from the cashier behind the registration desk to the cafeteria staff.

Patient experience must be developed through a comprehensive set of procedures, rather than a one-off training program. Hospitals must internalize patient experience into their core values and help staff to understand patient values and opinions. When helping a top-tier III-A hospital, Deloitte Consulting helped the hospital map patient experience by evaluating the presence of the following: Respect, Communication, Education, Knowledge, Physiology, Psychology, Participation, Coordination, Integration, Transfer to Lower-Acuity Care and Accessibility. Respect, for example, refers to understanding and acknowledging the patient's values and preferences, including their culture, dignity, privacy and sense of individualism while emphasizing quality of life, and then using these measures to develop a tailored therapeutic program for the patient. This includes addressing a patient by his or her preferred name; locating the patient's bed or room according to his or her preferences as possible; and responding to patient requests in a timely manner. Deloitte also assisted the hospital to set up an office to address patient experience and complaints, allocate funds to develop patient experience by rewarding staff with outstanding performance, collecting and analyzing patient experience data, and using this data in the hospital's performance assessment system. If there is a lack of motivation, leadership or buy-in to these core principles, it will be difficult to have full participation in the process and an optimal improvement in patient experience cannot be achieved.

Of course, there are times when it is impossible to meet all patient demands. Expectation management is therefore a critical competency for hospitals to develop, for example by discussing the expected tests and treatments that will be taken and patients' expected living environment prior to admission. Based on Deloitte's suggestions, the III-A hospital now informs patients about expectations of their stay through pamphlets and pre-admission videos that describe, for example, how rest might be disturbed by emergency care for another patient; how nurses will respond to call bells according to urgency of need; and how to effectively discuss their care with their doctor. Meanwhile, the hospital asks that patients participate in improving their experience by asking patients in shared wards to minimize noise at night, to inform the department when a ward has not been sufficiently cleaned, and to ask doctors and nurses if they have washed their hands. Through the project, patient satisfaction in the hospital has soared from 55% to 92% in just half a year.

Improve Patient Confidence through Patient-Centered Care

A large part of improving patient confidence lies in understanding target patient needs, clearly defining the hospital's market positioning and focusing medical resources on meeting those needs. Policy influence has gradually shifted China's healthcare market from a seller's market to a buyer's market as competition increases from private hospitals, and physicians are better able to choose where they practice. If public hospitals want to retain their competitive advantage, meet patient needs and re-affirm patient trust in their services, they must understand and target their services towards those needs. Re-focusing a hospital's mandate from hospital-centeredness to patient-centeredness will therefore help the hospital greatly improve the quality of patient care. A patient-centered focus will also help the hospital shed outdated and rigid management models, and help them adapt to new markets based on the ever-increasing complexity of patient needs, allowing them to deliver tailored services and enhance their competitiveness. Moreover, this change will also increase patient loyalty, increase their public prominence and thereby grow their market.

When becoming more patient-centered, public hospitals must first set up a solid overall strategy. Patient-centeredness is a foundational process in orienting the hospital towards patient needs, not a fleeting exercise in lip service. Patient-centered initiatives should be joint initiatives between the management and clinical service units of the hospital. To accomplish this, public hospitals need to strengthen their understanding of their patients, making decisions based on research insights and tailoring services to patient needs. Therefore, any promotion should focus on both clinical performance and service quality. Marketing campaigns may be launched through multiple approaches, including advertising, community service with experts, Q&A programs with doctors on TV and radio, to name just a few.

As hospitals form alliances, patient-centered care will become easier thanks to the vertical sharing of resources. As an example, the central, tertiary hospital in such an alliance serves to treat difficult and expensive cases, while cheaper, lower-level hospitals may treat more common illnesses and perform rehabilitative services. In this way, tertiary hospitals are relieved of the need to treat low-complexity diseases, allowing them to focus on difficult cases. Such a system also allows lower-tier hospitals to enjoy improved patient flow, which can in turn improve the efficiency of their resource use. Such a referral system will also reduce patient medical expenses and can foster service quality improvement, strengthening the medical alliance's reputation as a whole. Secondly, transfer of technical skills from the central hospital to lower-tier hospitals will help the latter improve their medical service capability and service quality. Furthermore, establishment of a medical alliance may help member hospitals capture medical professional resources. With the full implementation of multi-site practice for physicians, larger medical alliances that have more patient channels will thereby better attract sought-after physicians. The current pilot alliance model involves a Grade-III hospital at the center of a collaboration with Grades I and II hospitals, with community service centers and township clinics together forming an alliance in the region, while local residents sign agreements to first seek medical care in the communities and be referred up according to need. However, many medical alliances currently struggle with technical coordination and information sharing, with poorly structured incentives that prevent long-term sustainability. Those medical alliances that have worked, however, find it easier to optimize resource allocations with effective distributions of human, financial and physical resources, as well as tight financial integration. Shanghai Ruijin Group is an example of the latter category.

Table 6: Medical Alliance in Practice in Various Areas

Medical Alliance	Details of Cooperation
Peking University People's Hospital	Various hospitals have joined the Peking University People's Hospital network by way of an integrated IT system. Hospitals adhere to a common set of rules and form a service community while remaining independent in property ownership and decision-making. Hospital President Wang Bin refers to the model as the "Contracted Alliance Model".
Maanshan Municipal Hospital Group	Competing with private hospitals, the Municipal Government of Maanshan had the city's public medical institutions consolidated into a hospital group, which is responsible for the investment, management and operation of State-owned assets in the city-level medical institutions, while providing the overall planning for allocation of the medical resources in local area.
Medical Alliance of Beijing Chaoyang Hospital	The Medical Alliance of Beijing Chaoyang Hospital is comprised of 2 Grade III hospitals, 2 Grade II hospitals and 7 community health centers with affiliations from the municipal health bureau to the military
Zhenjiang First People's Hospital	Zhenjiang First People's Hospital uses entrusted management: the community assets remain owned by the district and county public health bureaus while management is entrusted to the tertiary hospital's management team, with party representatives involved in oversight.
Huai'an First People's Hospital	Huai'an First People's Hospital established 4 branch hospitals by acquisition and other means, using its technical expertise and experience to improve its subsidiary Grade-II hospitals' scale, operation, and community health capabilities.
Fifth Hospital in Wuhan	Fifth Hospital of Wuhan is directly affiliated to the Health Bureau under the Hanyang District Government of Wuhan City. The District Public Bureau allocated 6 out of the 11 communities within its jurisdiction to the hospital and transferred both asset and management rights to the hospital. Fifth Hospital of Wuhan therefore manages the public health of its entrusted communities directly, allowing it to consolidate its resources in these jurisdictions.

Source: Debate on Medical Alliance, Deloitte Analysis

Develop Standardized Clinical Processes

Standardizing clinical processes is an important part of quality improvement, optimizing resource utilization and improving patient safety. The Joint Commission on Accreditation of Healthcare Organizations International (JCI), the predominant international hospital accreditation organization, stipulates that hospitals should have standardized processes for admission, transfer and discharge and ensure that services are consistent and coordinated throughout the diagnosis and treatment process. The China National Health and Family Planning Commission also recommends that hospitals focus on patient-centeredness and develop streamlined workflows to achieve this goal. Standardizing clinical processes will allow hospitals to better coordinate and distribute responsibilities between departments, improve care, and use resources efficiently. For instance, initial exam and standardized bed allocation rules help avoid unnecessary time spent on inter-department coordination and help patients be admitted without unnecessary delay. Real-time bed monitoring will help departments manage sudden patient increases, reduce workload for the medical staff and improve patient safety. Good referral systems will help patients to receive the appropriate care after discharge and reduce the risk of re-admission. Coordinating medical services within the hospital will also help ensure that care is efficient, effective and meets patient demands, while minimizing overlap and redundancy.

In contrast to the standardization of clinical processes, clinical pathways are a quality improvement model that focus on the treatment course itself. Informed by evidence-based medicine and specific to each diagnosis, clinical pathways are used to reduce treatment risk and optimize resource use by standardizing a number of aspects of medical, surgical and nursing care for common diseases. Initiated in the United States in the 1980s, clinical pathways have been applied widely in Europe, North America and Asia, and have been recognized by JCI as a core standard for hospital assessment and evaluation. Clinical pathways were introduced to China somewhat later - it was not until 1998 that the first Chinese hospitals began to apply clinical pathways to a limited number of diseases. In 2009, the NHFPC officially launched clinical pathway implementation as a priority nationwide. By the end of 2011, clinical pathways were available in 25,503 departments in 3,467 medical institutions around the country. Preliminary evidence is showing that clinical pathways improve patient safety, enhance service efficiency, regulate drug prescription, control costs and improve patient satisfaction (see Table 7). In October 2010, the NHFPC issued the guiding opinions on promoting clinical pathway management in the "12th Five-Year Plan" and listed working targets, requiring that all Grade III hospitals and 80% of Grade II hospitals have implemented clinical pathways by the end of 2015 and the number of specialties and diseases covered by clinical pathways increased.

Table 7: Evaluation of National Clinical Pathway Pilot Sites

	Index	Pilot Results
Patient Safety	• Admitted and discharged patient mortality from top 10 diseases • Admitted and discharged patient hospital-acquired infection rate among top 10 diseases • Admitted and discharged patient surgical infection rate among top 10 diseases • Mortality rate from random disease selection	• 0% • 0% • 0% • Drop by 0.12%-1.34%
Service Efficiency	• Average length of stay • Average length of pre-surgical stay for planned cesarean, nodular goiter and chronic sinusitis	• 90% of measured disease categories had a descending trend • Decrease of 0.06-0.16 days
Drug Administration	• Average medication expenditure per stay for randomly selected diseases • Average antibiotic expenditure per stay for randomly selected diseases	• 66% of disease categories surveyed had reductions of 4.5%-65% • 88% of disease categories surveyed had reductions of 9%-65%
Medical Expense	• The average cost of stay for discharged patients admitted through clinical pathway for one of top 10 diseases	• 90% of clinical pathway disease categories saw lower expense growth than non-clinical pathway diseases
Patient Satisfaction	• Patient satisfaction rate among clinical pathway patients	• 97.3% among clinical pathway patients, which is higher than the non-clinical pathway group

Source: Department of Policy and Regulations, Deloitte Analysis

Improve Hospital Information Systems

Medical information systems manage information collection, storage, access, and sharing to support clinical operations and support the clinical and management decision-making process. With the rapid growth of medical research, increasing demands on clinical care and more stringent government-enforced cost control, hospital management is becoming ever more complicated, making information technology critical for hospital operations. First, IT systems can help improve service quality: medical care typically involves frequent communication between doctors, nurses, patients and family members, and between departments, hospitals, and regions. Information technology can greatly improve communications and thus enhance service provision. For instance, an effective electronic medical record (EMR) system will improve information sharing between the inpatient, outpatient, and emergency departments, enabling doctors and nurses to access patient history quickly, speeding up patient handover while minimizing test and procedure redundancy. Second, information systems will improve patient safety as the EMR can be used to alert users to prescribing errors, drug interactions and patient allergies and intolerances. ECG and vital recording systems within anesthesia machines will take accurate records of anesthetic administration to improve the safety of surgical procedures. Third, information technology will help improve operational efficiency and cut costs. Electronic sickbed monitoring systems will help hospitals better allocate their nursing staff. Clinical progress notes and nursing care records can also be entered into information system for better use. At the management level, consolidation of management, financial, and clinical data will help the clinical and management decision-making process and help hospitals improve their operations.

Hospital information systems (HIS) and clinical information systems (CIS) will be eventually consolidated in regional health information network (RHIN). The HIS functions as the day-to-day information management platform in hospitals and provides the interface for clinical data collection. The CIS, on the other hand, is a system of collecting, storing, processing and transmitting medical data with the patient at the center and is made of a prescription processing system, physician work platform, nursing information system, laboratory system, and Picture Archiving and Communication System (PACS) etc. Most hospitals begin with establishing a HIS, then gradually implement a CIS. The much more in-depth CIS not only supports the medical and nursing professionals' daily work, but the vast clinical data collected can help hospital managers to develop deeper understanding of patients and the issues emerging from various departments. As a further step, GMIS is designed to share both HIS and CIS information between hospitals and between the various institutions engaged in the health care industry such as the payers, manufacturers and vendors of medical products and devices.

Some advanced countries that have prioritized health IT improvement have entered into the stage of promoting GMIS. In the United States, for example, the majority of hospitals have begun consolidation of their information systems, with a focus on EMR consolidation. The American government has also been promoting information systems, investing US $19 billion under the Recovery and Reinvestment Act in 2009 to promote electronic medical records. Meanwhile, the government has proposed establishing a national health information network, launching projects to promote translatability between hospital information systems by writing technical standards and guidelines. In the UK, where healthcare is entirely public, the National Health Service invested GBP 6 billion to develop a national electronic medical record system, in collaboration with various international contractors. In China, the Development Outline of Public Health Information System in China 2003-2010 proposed the construction targets of both the medical service information system and regional health information infrastructure. In the 2009 health reform plan, the establishment and use of a shared health information system is listed as one of the eight columns of the "Four Beams and Eight Columns" in support of deepening health reform. A series of policies issued thereafter (see Table 8) suggest that the government will continue to prioritize regional medical platforms, while the establishment of HIS and CIS systems will help move china towards eventual GMIS development.

Table 8: Chinese Government Policies Promoting Medical Information Systems

Year	Policy	Implication
2002	The National Development Outline of the Health Information System 2003 – 2010 issued by the NHFPC	The construction of the information system is incorporated into health reform and target dates for clinical information system implementation are proposed
2006	National Strategy of Development of the Information System 2006 – 2020 promulgated by the General Office of the Central Committee of the CPC and the General Office of the State Council	It is strongly suggested that strengthening medical information systems is one of the strategic highlights of the development of the information system in China.
2009	Opinions of the CPC Central Committee and the State Council on Deepening the Reforms of the Medical System	The construction of practical, collaborative medical insurance information systems is adopted as one of the eight columns of the "Four Beams and Eight Columns" in support of health reform
2011	NHFPC Construction Engineering Projection of the Health Information System during the "12th Five-Year Plan" Period	The road map, or the "3521 Project", for construction of the public health information system in China is established, namely a 3-tiered public health information platform will be built up, with 5 sectors of business applications, including the public health, medical services, NCMS, essential drug list and comprehensive management; 2 basic databases, including the health archives and electronic medical record, will be built up to form 1 integrated network
2012	Planning and Implementation Plan of Deepening the Reforms of the Medical System during the "12th Five-Year Plan" Period as issued by the State Council	It is proposed that clinical evidence be used to support hospital decision-making, while information systems such as EMR, health archiving should be established.
2013	The Development Planning of the Information System as issued by the Ministry of Industry and Information Technology	It is emphasized that medical information system development should include EMR and e-health archives, strengthening hospital management information systems and the sharing of regional public health information

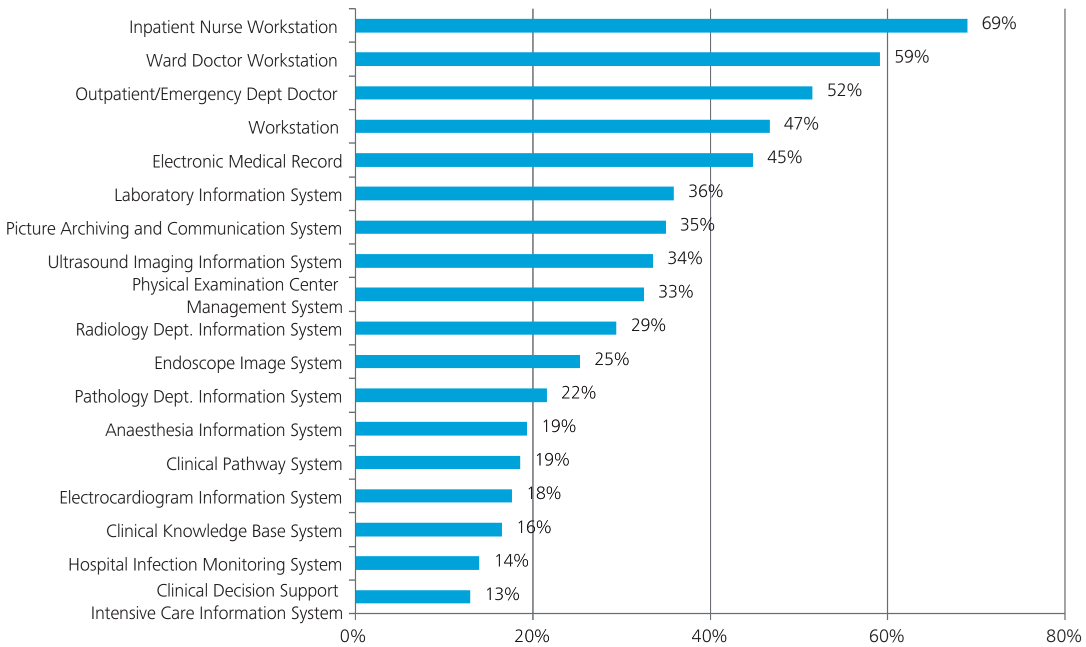
Source: Deloitte Analysis

In China, information systems have begun to be established in the majority of the hospitals , and the next steps are the integration between the various parts of the hospital information systems. CIS, on the other hand, is not commonplace. The China Hospital Association's Information Management Committee found that in 2012, among 1,067 hospitals surveyed, implementation rates for clinical information systems were less than 50% outside of nursing stations, ward doctor stations and outpatient and emergency doctor station. Hospitals surveyed stated that information systems could best be used to address quality improvement and patient safety, operational efficiency and cost reduction for 83%, 81% and 69% of respondents respectively. This indicates a strong demand for information systems, and that information systems in hospitals are likely to accelerate in implementation.

Next, medical information systems in Chinese hospitals are disconnected from each other, and are largely incompatible, built on a variety of platforms and systems without proper coordination. Systems are also poorly compatible between vendors. Hospitals must achieve better communication during the set-up of information systems in order to avoid further complicating the difficult challenges of post-setup integration.

Finally, information system functionality is still largely limited to basic financial and payment transactions, with much room for improvement in both scope and quality. As shown in Figure 15, the application rate of clinical information systems remains relatively low despite remarkable development on the clinical and nursing functions as well as decision support software. Moreover, Chinese hospitals, particularly large III-A hospitals, have accumulated vast amounts of clinical and management data over the past decade, which can be used to facilitate decision-marking at the clinical and management levels. At present, however, only a handful of hospitals use analytical techniques to support their decision-making processes.

Figure 15: Clinical Information System Implementation Rates, 2012-2013



Source: China Hospital Information Management Association, Deloitte Analysis

Appendix: Table of the Current Tax Policy Comparisons of the Profit-Making and Not-for-Profit Medical Institutions

Item*	Non-Profit	Profit-Making
Medical Service Income Medical services refer to the services rendered by medical service institutions to the patients in terms of medical examinations, diagnoses, treatment, recovery and the provision of preventive healthcare, obstetric and family planning services as well as the provision of drugs, medical devices and supplies, ambulance, ward accommodation and diet as relating to the afore-mentioned services	• Non-profit medical institutions adhere to the guiding prices of medical services as set forth by the government and enjoy the corresponding preferential tax policies.(Weiyifa No. [2000]233) • No tax shall be levied on medical service income, which is obtained by the not-for-profit medical institutions in conformity with the State-stipulated prices. The foregoing policy shall not apply to any such medical service income as obtained not in conformity with State-stipulated prices. (Caishui No. [2000]42)	• Profit-making medical institutions have their medical service prices subject to no restrictive control and run may business operations at their sole discretion and pay tax according to the law. (Weiyifa No. [2000]233) • Profit-making medical institutions should pay corporate income tax under the State stipulations and may charge for medical services rendered by them at their sole discretion free of business tax (Guobanfa No. [2010]58)
Non-medical service income (Such as income from rent, property transfer, training and outward investment)	• Taxes shall be levied on income, which is obtained by non-profit medical institutions through engagement in any non-medical services, under the applicable regulations. • Income earned by non-profit medical institutions from non-medical services that is directly used in the improvement of their medical service conditions may be used to offset the corresponding taxable amount subject to approval by tax authorities, with corporate income tax to be levied on the balance. (Caishui No. [2000]42)	• Tax paid without special exemptions.
Self-Produced Preparations for Self Use	• No VAT shall be levied on income produced for self use in non-profit medical institutions (Caishui No. [2000]42)	• Income earned by profit-making medical institutions that is directly used in the improvement of their medical service conditions shall not be subject to VAT provided that income is intended for self use for a period of three years starting from the date of collection of the business license. (Caishui No. [2000]42)
Pharmacy	• Pharmacies shall be split from non-profit medical institutions and act as independent drug-retailing enterprises, on which various taxes shall be levied under the applicable regulations. (Caishui No. [2000]42)	• Pharmacies shall be split from profit-making medical institutions and act as independent drug-retailing enterprises, on which various taxes shall be levied under the applicable regulations. (Caishui No. [2000]42)
Property, Urban Land Use and Vehicles	• No property tax, urban land use tax or vehicle use tax shall be levied on the property, land and vehicles procured for self-use by non-profit medical institutions (Caishui No. [2000]42)	• Income earned by profit-making medical institutions, that is directly used in the improvement of their medical service conditions, will not be subject to real estate tax when such items are procured for self-use, for a period of three years starting from the date of collection of business license. (Caishui No. [2000]42)

* In practice, it can be argued that the policy regarding corporate income tax as specified in the Document Caisui No. [2000]42 has been nullified by the launch of the new corporate income tax law in 2008. Under the new corporate income tax law, only non-profit organizations that meet the set criteria will qualify for corporate income tax exemptions.

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