

## **China's Healthcare Construction Market**

This report covers the healthcare construction market for mainland China excluding Hong Kong, Macao, and Taiwan. As there are little statistics available for this market, numbers used in this report are estimates from the official statistics of the Ministry of Health, combined with numbers from our research and analysis through press articles, meetings and interviews with healthcare professionals.

### **SUMMARY**

China's investment in hospital construction has increased by about 20% annually during the past decade. In 2003, China spent RMB28 billion from national revenue in the construction of healthcare facilities. But when taking spending from local revenue into account, medical professionals believe that China's yearly investments in health construction should range from RMB 60 to 70 billion. Despite its increasing heavy financial input, China's healthcare system still falls far behind the world's standards. China today has 18,396 hospitals with 2.4 beds per thousand people. With 1.3 billion people accounting for 22% of world's population, China only has about 2% of world's total medical resources.

Having learned a bitter lesson from 2003 SARS (severe acute respiratory syndrome) epidemic, China has been committed a greater amount of expenditure to improving its healthcare infrastructure. Given most hospitals being built before with outdated design and lack of safety consideration, it is expected that 80% of China's existing hospitals need to be reconstructed over the next 10 years. In addition, China's 300 Centers of disease control (CDC) at or above the prefectural level are facing the same situation and will have to be rebuilt within the next 3-5 years. Thus, the development momentum for China's healthcare construction should continue to remain strong. With priorities given to infectious disease control, emergency medical rescue and treatment, women, children, and mental health, and treatment of chronic diseases, this market will present ample opportunities for U.S. healthcare facilities design and engineering firms, medical equipment suppliers, and medical service provider or investors.

### **I. CURRENT MARKET SITUATION**

#### **1. 80% of Existing Hospitals in China needs to be rebuilt**

Under the past centralized planning system, like most other social welfare facilities, virtually all China's hospitals were invested, owned, and run by the government or state-owned business entities. Until 2000, China completed 16318 hospitals, of which most were built during 1950s and 1990s (see Table 1) with common defects in design and engineering. Major defects are characterized by incomplete functional layout, little

consideration of hospital safety systems, lack of environmental friendly concept, deficiency in patient first philosophy, and poor installation and use of medical equipment, and hospital management system. Many foreign hospital designers pointed out, hospitals with such shortcomings are far too outdated to effectively help combat emergency medical crisis and safeguard people's life.

In the wake of 2003 SARS outbreak, the Chinese government at all levels came to realize the importance of upgrading its healthcare system. In the next 10 years, it is projected that 80% of the Chinese hospitals have to gradually undergo a restructuring process by ways of rebuilding, expansion, and relocation.

Table 1: Number of Hospitals in China, 1950-2004

Type/Year	1950	1980	1990	2000	2003	2004
General Hospitals	2,692	7,859	10,424	11,872	12,599	12,902
TCM Hospitals	4	678	2,080	2,591	2,518	2,610
Specialized Hospitals	85	694	1,362	1,543	2,271	2,494
Hospitals in Total	2,803	9,902	14,377	16,318	17,764	18,396
Medical Inst. In Total	8,915	180,553	208,734	324,771	291,323	296,492

Source: Ministry of Health, PRC

Note: TCM – Traditional Chinese Medicine

## 2. Virtually All Centers of Disease Control in China Have to Be Reconstructed

By 2004, China had a total of 3586 centers of disease control and prevention (CDC) nationwide with 300 at and above the prefecture level. Historically, almost all CDCs used to be named epidemic prevention stations. Their major functions were to keep the Chinese people healthy through cleaning the environment and eliminating four major pests (rats, mosquitoes, flies, and cock-roaches). Before 1980s, these CDCs received little attention and funding from central and local government.

During 1980s and 1990s, CDC's major role was gradually shifted and expanded to a broader range. Their main responsibilities included prevention and control communicable diseases like HIV/AIDS, tuberculosis (TB), sexually transmitted diseases (STD), and viral hepatitis B, etc. Although China began stressing the importance of public health and intensified its input during this period, many CDCs' working environment was still far below standards. A vast majority of them still used conventional office buildings to perform their routine work. Most of these buildings were not even designed or intended as healthcare facilities, let alone were given into account the issues of cross contamination and safety assurance for CDC healthcare

workers.

After 2003 SARS crisis, the Chinese government has been driven to accelerate the construction pace for public health system. This system will include emergency alarming, reporting, and responding to epidemic contingencies. China presently has 4 centrally administered municipalities, 27 provincial capital cities, and 282 cities at the prefecture levels. Within the next 3-5 years, China requires each of these 300 cities to rebuild, or relocate their CDCs with necessary equipment to ensure safe working environment and effective job performance. It is estimated that the construction of these CDCs will cost RMB20-30 billion.

### **3. China's Health Construction Market Grows Fast but Challenges Remain Tough**

China's investment in healthcare facilities registered a rapid expansion over the past 10 years. In 1995, China spent RMB7.3 billion from the national central revenue on health construction sector. By 2003, this number rose to RMB28 billion (see Table 2 below), almost 4 times equal to that of 1995. As the expenditures from local government of all levels are not included in these statistics, many healthcare insiders believe that China's total yearly investment should range between RMB60 billion to 70 billion, while some claimed this number to be exceeding RMB80 billion.

Despite its fast investment growth, China's healthcare system is still far from satisfactory. Among all types of medical institutions and medical specialists in China, 80% are allocated to urban areas serving 450-500 million citizens, while only 20% are scarcely available for the 800-850 million rural residents. Outsiders could be wondering about why this situation occurred. But insiders know well that has resulted from the centralized planning system over the past 50 years. Under that system, policy makers distributed medical resources without a careful feasibility study and consideration of location and people's needs. As a result, present Chinese healthcare system is inevitably facing many challenges. Such challenges include poor quality of hospital design and planning, uneven distribution of medical resources, difficulties for many citizens to see doctors, high medical costs etc. As China now realizes the drawbacks of this system and is trying to build a harmonious society through improving healthcare system for every resident, the healthcare construction market should continue to grow at the current rate.

Table 2: Funds and Construction Investment in Healthcare Sector 1995-2003

	Funds Allocated to Healthcare Sector		Construction Investment in Healthcare Sector	
	100 Million Yuan	% of State Expenditures	100 Million Yuan	% of Construction Investment
1995	163.3	2.39	73.40	
1996	187.57	2.36	86.65	1.01
1997	209.20	2.27	104.31	1.05
1998	225.10	2.08	141.67	1.19
1999	235.60	1.79	147.43	1.18
2000	272.17	1.71	152.89	1.14
2001	313.50	1.66	182.60	1.23
2002	350.44	1.59	231.50	1.31
2003	449.87	1.83	280.15	1.22

Source: Ministry of Health, PRC

## **II. MARKET PROSPECTS AND BUSINESS OPPORTUNITIES**

### **1. Opportunities for U.S. Healthcare Facility Design and Engineering Firms**

China's fast growing hospital construction market should benefit U.S. design and engineering firms. China built an average of 270 hospitals every year during 1950 and 2000 and 519 hospitals each year from 2000 to 2004. As SARS directly caused an economic lost of RMB300 billion to China, which is partially attributed to the poor and outdated design and planning of most existing healthcare facilities, the Chinese government appropriated millions of dollars to upgrade its healthcare infrastructure. Such new infrastructure projects will include more centers for disease control, more hospitals for infectious disease, women, children, and mental health, and more emergency life-saving units with the existing general and specialized hospitals.

In order to ensure the sustainable development of the Chinese healthcare system, China is badly in need of adopting advanced and modern design concept from the outside world. Therefore, opportunities should exist for U.S. healthcare facilities design and engineering firms that are interested in this market. As the Chinese economy is unevenly developed and a vast gap exists between coastal developed regions and inland provinces, such opportunities are mainly concentrated on those medium and large cities in coastal regions plus provincial capital cities in inland provinces. In recent years, more and more Chinese hospital management executives have shown willingness to consider or accept western design ideas. For instance, several hospitals and CDCs in Shanghai, Guangzhou, Shenzhen, and Dongguan have selected design firms from the U.S., France, Japan, and Germany as their partners for their respective projects.

### **2. Promising Market for U.S. Medical Equipment Suppliers**

China's increasing needs for medical equipment from newly built healthcare facilities should prove promising for U.S. medical equipment suppliers. Among the present expenditures of RMB60-70 billion in healthcare facilities each year, proximately 25-35% are designated for procurement of medical equipment. Given the on-going intense competition among hospitals, most newly built healthcare facilities have strong desire to apply new, innovative, and technology intensive high-end medical equipment in order to gain competitive advantages. Following is a partial list of potentially targeted medical equipment for these new healthcare facilities:

Diagnostic imaging equipment

Surgical and therapeutic equipment or system

Equipment for emergency rescue and treatment

Biosafety laboratory equipment or instruments

Anti cross contamination equipment for critical care units (CCU), Intensive Care Units (ICU), patient wards, emergency rooms, and operation rooms etc.

Centralized safety air conditioning and filtration system

Negative air flow system

Hospital information system and PACS etc.

Hospital materials flow and handling system

Testing instruments for food and environmental safety and occupational health

Rapid test instruments for communicable diseases

### 3) Market Potential for U.S. Medical Service Providers

China's efforts to improve healthcare infrastructure and system will generate opportunities for U.S. firms that are engaged in healthcare management, medical logistic service, and healthcare facility investments. It has been well known that the Chinese government has been trying various possible ways to improve its healthcare service quality. Examples of these ways include encouraging foreign and domestic private investments, allowing private businesses to take shares of state-owned hospitals, contracting out hospital management services to foreign investors, and permitting foreign investors to jointly operate clinics or departments within hospitals by form of either equipment or capital investments.

The government's above measures, intended to introduce competition, raise efficiency, and limit fast rising medical costs, have been reported with preliminarily positive results. For instance, in Foshan city of Guangdong, a general hospital allowed a foreign investor to jointly run a diagnostic imaging unit, and contracted out its logistic service to a foreign medical service provider. In Suzhou city of Jiangsu, public hospitals invited tenders for hospital management service. In Zhejiang, private investors have successfully purchased shares of 70 hospitals with a total of investment of RMB10 billion. In Shanghai, several investors from the U.S. South Korea, and Germany have started their joint venture hospitals. While a growing number of

Chinese private investors are showing interest in participating in China's healthcare reform, foreign investors seem to be more conservative. Among 290,000 medical institutions of all types in China today, only 45 belong to Sino-foreign joint ventures with a small number being classified as hospitals and a large majority being small dental or eye clinics, health examination and nursing centers etc. Despite this situation, it is still widely believed that foreign businesses should find more opportunities rather than obstacles from the on-going expansion of China's healthcare market.

### **III. MARKET ACCESS**

U.S. companies, interested in participating in China's healthcare facilities projects, supplying medical equipment, setting up representative offices or joint ventures, or offering medical services, should first familiarize themselves with the China's current regulations, relevant government regulatory agencies, and available information resources.

#### 1. China's WTO commitments and Relevant Regulations

##### 1) Distribution Service

According to China's WTO commitments on distribution service, "foreign service suppliers may establish joint ventures to engage in the commission agent's business and wholesale business of all imported and domestically produced products (with some exceptions) in one year after China's accession to the WTO".

But in reality, US exporters may find it more effective and economical to use existing Chinese distributors and their sales networks for product distribution in China. This is especially true when it comes to medical devices that requires specialized knowledge and service skills. The Commercial Service of U.S. Department of Commerce provides various services to U.S. manufacturers or suppliers that are interested in finding product distribution partners in China. Details about these services are available at our Department of Commerce's website: [www.buyusa.gov](http://www.buyusa.gov) .

##### 2) Architecture Service

Based on China's WTO commitments, "For cross border supply, cooperation with Chinese professional organizations is required except scheme design. For commercial presence, only in form of joint ventures with foreign majority ownership will be permitted. Wholly foreign-owned enterprises are permitted in five years after China's accession to the WTO".

##### 3) Medical and Dental Service

As per China's WTO commitments, "Foreign service suppliers are permitted to establish joint venture hospitals or clinics with the Chinese partners with quantitative limitations in line with China's needs. Foreign majority ownership is permitted".

In accordance with the “ Interim Regulations on Administration of Sino-Foreign Joint Venture and Cooperative Medical Institutions” jointly issued by the Ministry of Health (MOH) and the Ministry of Foreign Trade and economic Cooperation (MOFTEC, now called Ministry of Commerce - MOFCOM) in 2000, the Chinese party of Sino-foreign joint ventures and cooperative medical institutions shall hold no less than 30% of shares and legal rights or interest, which also means foreign investors are allowed to hold a maximum stake of 70%. Such regulations also specify that the establishment of Sino-foreign joint venture and cooperative medical institutions should be approved respectively by MOH and MOCOM.

## 2. Government Agencies and Organizations that Regulate Healthcare Projects

Under the Chinese National People’s Congress and the State Council, there are various ministries and organizations that regulate China’s health and medical sectors. Following is a list of major related Chinese national government agencies and organizations that formulate budgets, appropriate funds, approve, or implement healthcare construction projects. When these projects are financed by local government revenue, U.S. companies should contact their counterparts at the provincial, prefectural, and county levels instead.

-- **The Ministry of Health (MOH)** has the overall responsibility for regulating China’s healthcare system. It oversees public health, healthcare institutions, health system reform, and medical research and also drafts and issues relevant administrative measures, notices, and circulars.

<http://www.moh.gov.cn>

-- The **Chinese Center for Disease Control and Prevention (China CDC)** is a nonprofit institution working in the fields of disease control and prevention and public health management. China CDC is committed to strengthening research on strategies and measures for disease control and prevention; organizing and implementing control and prevention plans for different kinds of diseases; carrying out public health management for food safety, occupational health, radiation health, environmental health, health care for women and children, etc. China CDC also acts as a national working group for disease prevention, emergency relief, and construction of public health information systems.

<http://www.ChinaCDC.net.cn>

E-mail: [ChinaCDC@public3.bta.net.cn](mailto:ChinaCDC@public3.bta.net.cn)

**The Ministry of Finance (MOF)** formulates and implements strategies, policies and guidelines for public finance, public revenue, and the central expenditures; administers government procurement, capital construction, and China’s domestic and foreign debts etc. For healthcare sector, MOF manages public revenue and make sure funds are properly used through government tendering process.

<http://www.mof.gov.cn>

E-mail: [webmaster@mof.gov.cn](mailto:webmaster@mof.gov.cn)

--- **The Ministry of Commerce (MOFCOM)**, formerly the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) and the State Economic and Trade Commission, regulates foreign investment in China. It formulates and implements foreign trade, economic cooperation, and foreign investment policies, and approves the establishment and operation of foreign-invested enterprises. MOFCOM also drafts and issues most laws and regulations specific to foreign investment.

<http://www.mofcom.gov.cn>

**The State Food and Drug Administration (SFDA)** is a bureau directly under the State Council. It oversees and regulates the research, production, and distribution of pharmaceuticals and medical devices. It also regulates food, health product, and cosmetic industries. Foreign products related to the above industries are subject to registration with SFDA before being allowed to be distributed in China.

<http://www.sfda.gov.cn>

Email: [inquires@sda.gov.cn](mailto:inquires@sda.gov.cn)

-- **The National Development and Reform Commission (NDRC)** is responsible for studying and proposing major strategies, policies, and plans for China's overall economic and social developments for all industrial sectors including education, culture, and public health, etc. It is also responsible for monitoring, analyzing all fixed assets investment activities, and approving state-funded construction projects.

<http://www.sdpc.gov.cn>

### 3. Tendering Agents for Healthcare Projects

In most cases, project undertakers use the tendering agents or companies to invite bids from potential partners or suppliers. The following is a partial list of such tendering agents:

For construction design and engineering, project undertakers normally invite bids through construction engineering exchange centers at the national, provincial, and municipal levels. Following is a list of several major centers:

China International Engineering Information Network (<http://www.ieichina.com>)

China Construction Engineering Information Network (<http://www.cein.gov.cn>)

Beijing Construction Contract Exchange Center (<http://www.bcactc.com>)

Guangzhou Construction Exchange Center (<http://www.gzcebc.cn>)

Shanghai Construction Exchanges Center (<http://www.jyxx.sh.cn>)

For procurement of medical equipment, hospital purchasers usually invite bids through commercial tendering companies or government procurement centers at the provincial

or municipal levels . Following is a partial list of major government procurement centers and commercial tendering companies:

Beijing Government Procurement Center (<http://www.ccgp-beijing.gov.cn>)

Shanghai Government Procurement Center (<http://www.shzfcg.gov.cn>)

Guangdong Government Procurement Center (<http://www.gdgpo.gov.cn>)

Guangzhou Government Procurement Center (<http://www.gzg2b.gov.cn>)

Shenzhen Government Procurement Center (<http://www.szzfcg.cn>)

Commercial Tendering companies:

#### Guangdong

Haihong Pharmaceutical Electronic Commerce Co. (<http://www.emedchina.net>)

GMG International Tendering Co. Ltd. (<http://www.gmgit.com>)

Guangdong Provincial Machinery & Electric Equipment Tendering Corporation  
<http://www.chinaguangdongbidding.com>

Shenzhen United Tendering Co. (<http://www.sztc.com>)

#### Beijing

Guoxin Tendering Corporation Ltd. (<http://www.gxzb.com.cn>)

Instrimpex International Tendering Co. (<http://www.cniitc.com.cn>)

Sinochem International Tendering Co., Ltd (<http://www.esinotech.com>)

#### Shanghai

Shanghai Machinery and Electrical Equipment Tendering Co. ([www.shbid.com](http://www.shbid.com))

Shanghai Integrated Machinery Group Company Ltd. (<http://www.smcec.com>)

#### 4. Conference and Trade Shows

China Hospital Management Society organizes a hospital construction and design conference and exhibition in August every year. This event was just held in Shanghai on August 30 to Sept. 2, 2005. Next year's event will be tentatively held in Beijing. Unfortunately, there is no online information available about this event.

For more information about the subject report, please contact us at:

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