Medical Devices Market in China to 2018

Government Reforms Aimed at Strengthening the Healthcare System and Expanding Access will Accelerate Growth
GBI Research Report Guidance

- The report includes an executive summary capturing the key points that determine the dynamics of the medical devices market in China.

- The ‘Market Characterization’ chapter provides information on market size for the historic period (2004-2011) and the forecast period (2011-2018). It also has information related to the medical devices market in China, market dynamics, and the competitive landscape.

- The following chapter captures the regulatory policies for medical devices in China.

- This is followed by a chapter on the healthcare reforms in China.

- The following chapters discuss the 10 medical device markets included in this report. These are: ophthalmic devices, In Vitro Diagnostics (IVD), diagnostic imaging, cardiovascular devices, nephrology and urology devices, orthopedic devices, drug delivery devices, diabetes care devices, wound care management, and healthcare IT. The company shares data available for the ophthalmic devices, IVD, drug delivery devices and the wound care management market is for 2010. The company shares information for the remaining markets: diagnostic imaging, cardiovascular devices, nephrology and urology devices, orthopedic devices, diabetes care devices and the healthcare IT market are for the year 2011.

- The next chapter provides details of the market landscape for the medical devices market in China, with profiles of major international and domestic medical device manufacturers.

- The ‘Pipeline Product Analysis’ chapter focuses on the pipeline products in various markets. Key pipeline products are listed and discussed in detail and product approval and expected launch dates are also provided for a number of products.

- The ‘Consolidation Landscape’ chapter discusses the consolidation landscape in the medical devices market in China. This chapter looks at the total number of deals and important partnerships that took place during 2007-2011.
Executive Summary

The medical devices market in China is forecast to grow at a Compound Annual Growth Rate (CAGR) of XX%, from $XX billion in 2011 to reach $XX billion in 2018.

A large population with a high percentage of elderly people, the rising incidence of chronic diseases and the country’s improving healthcare infrastructure are major driving factors for the medical devices market in China. China’s healthcare reforms are focused on improving the country’s healthcare services, with emphasis on improving the rural healthcare system. Improvements in the country’s healthcare infrastructure due to healthcare reforms and stimulus spending are expected to drive the market growth for both international and domestic companies. Growth drivers include factors such as improved affordability and accessibility of healthcare services, and increased demand for medical devices and equipment due to an increase in the number of hospitals. As the new insurance policies aim to increase the reimbursement ratio for a number of diseases, an expanding patient base will result in significant growth opportunities for the medical device manufacturers in the country.
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2 Introduction

The medical devices market in China has a significant presence of both international and domestic players. Domestic players essentially occupy the low and middle-end market, with a large number of players competing in these market segments. The presence of international participants is concentrated in the market for high-end products. The healthcare reforms implemented by the government in 2009 have helped China in the transition from a market-oriented economy to one focused on developing a strong healthcare infrastructure for the country.

The medical devices market in China has turned into a lucrative market with changes in regulatory and approval policies, especially for the domestic medical devices. This is helping local players to enter the medical device market, although competition among a number of smaller players is in turn expected to lead to pricing pressure and consolidation, which may have an impact on the profit margins.

The increasing number of hospitals as a result of the healthcare reforms and improving healthcare coverage in the country are expected to further increase the demand for medical devices. Other driving factors include an improving economic infrastructure, increasing healthcare expenditure and Gross Domestic Product (GDP), along with favorable patient demographics.

In this report, GBI Research has included the following major medical device markets in China: In Vitro Diagnostics (IVD), ophthalmic devices, orthopedic devices, cardiovascular devices, diagnostic imaging, nephrology and urology devices, diabetes care devices, drug delivery devices, wound care management, and healthcare IT.
7 Ophthalmic Devices Market, China - Market Characterization

7.1 Ophthalmic Devices Market, China, Revenue ($m), 2004-2011

The following figure shows the revenue generated by the ophthalmic devices market in China from 2004 to 2011.

Figure 15: Ophthalmic Devices Market, China, Revenue ($m), 2004-2011

Source: GBI Research’s proprietary database [accessed on April 23, 2012]; primary research interviews with marketing managers and other industry experts
The following table shows the revenue generated by the ophthalmic devices market in China from 2004 to 2011.

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Source: GBI Research’s proprietary database [accessed on April 23, 2012]; primary research interviews with marketing managers and other industry experts

The Chinese ophthalmic devices market grew at a CAGR of XX%, from $XXm in 2004 to $XXm in 2011. The largest category was vision care, with a value of $XXm in 2011. The increasing elderly population is driving the growth of the ophthalmic devices market in the country. A number of ophthalmic disorders such as cataracts, glaucoma and refractive disorders are age-related, and the rapid increase in the elderly population in China is creating a large patient pool. Increasing healthcare expenditure is also making surgeries for ophthalmic disorders affordable, resulting in an increase in the ophthalmic surgical volumes.

Growing awareness about ophthalmic disorders is another key driving factor for the ophthalmic devices market. Government initiatives to promote early detection and timely treatment of these disorders are increasing the adoption of ophthalmic devices in China. The increasing number of outpatient surgeries for cataracts is also instrumental in driving the demand for surgical equipment.
8.2 **In Vitro Diagnostics Market, China, Revenue ($m), 2011-2018**

The following figure shows the revenue generated by the in vitro diagnostics market in China from 2011 to 2018.

![Figure 20: In Vitro Diagnostics Market, China, Revenue ($m), 2011-2018](image)

Source: GBI Research's proprietary database [accessed on April 23, 2012]; primary research interviews with marketing managers and other industry experts.
The following table shows the revenue generated by the in vitro diagnostics market in China from 2011 to 2018.

Table 9: In Vitro Diagnostics Market, China, Revenue ($m), 2011-2018

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Source: GBI Research’s proprietary database [accessed on April 23, 2012]; primary research interviews with marketing managers and other industry experts

The in vitro diagnostics market is forecast to grow at a CAGR of XX%, from $XXm in 2011 to reach $XXm in 2018. The increasing focus on preventive measures and rural health will be the major driving factors. Free checkups for specific groups of the population, including women, children and the elderly, will boost the IVD market in China. Growth in the IVD market can also be attributed to the increasing number of hospitals, as well as the establishment of new private clinics in China.
9.3 **Diagnostic Imaging Market, China, Key Company Share (%), 2011**

The following figure shows the market shares of key companies in the diagnostic imaging market in China in 2011.

**Figure 24: Diagnostic Imaging Market, China, Key Company Share (%), 2011**

Source: GBI Research’s proprietary database [accessed on April 23, 2012]; primary research interviews with marketing managers and other industry experts

The following table shows the market shares of key companies in the diagnostic imaging market in China in 2011.

**Table 13: Diagnostic Imaging Market, China, Key Company Revenue ($m), 2011**

<table>
<thead>
<tr>
<th>Company Name</th>
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<td>GE Healthcare</td>
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<td>Mindray Medical International Limited</td>
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<td>Esaote S.p.A.</td>
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<td>Samsung Medison Co., Ltd.</td>
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<td>Others</td>
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Source: GBI Research’s proprietary database [accessed on September 8, 2012]; primary research interviews with marketing managers and other industry experts
Appendix

20 Definitions

20.1 Ophthalmic Devices

Ophthalmic devices are those devices which are used for vision correction or in ophthalmic diagnostic procedures. Categories covered under ophthalmic devices are cataract surgery devices, refractive surgery devices, ophthalmic diagnostic equipment, glaucoma surgery devices, vitreo retinal surgical devices and vision care products.

20.2 In Vitro Diagnostics

In Vitro Diagnostics (IVD) include reagents, instruments, and systems intended for use in the diagnosis of disease or other conditions, including the determination of the state of health, in order to treat or prevent disease. Such reagents, instruments and systems are intended for use in the collection, preparation, and examination of specimens taken from the human body. The categories tracked under this market are clinical chemistry, immunochemistry, haematology, histology and cytology, infectious immunology, microbiology culture and genetic testing. In this market only values have been tracked.

20.3 Diagnostic Imaging

Diagnostic imaging devices are used for the visualization of structural and functional patterns of organs or tissues. MRI systems, ultrasound systems, X-ray systems, bone densitometers, C-arms, angiosuites, mammography equipment, computed tomography systems, nuclear imaging equipment and contrast media injectors are tracked under this market.

20.4 Cardiovascular Devices

Cardiovascular devices are used in treating diseases related to the heart and the circulatory system. It also includes the devices used to record the electrophysiological impulses of the heart and to analyze and diagnose any abnormality related to the cardiac function. The cardiovascular devices market includes devices used in interventional cardiology, peripheral vascular devices, cardiac rhythm management, external defibrillators, electrophysiology, cardiac surgery, cardiac prosthetic devices, prosthetic heart valves, cardiac assist devices and devices used to monitor cardiac events.

20.5 Nephrology and Urology Devices

Nephrology and urology devices are intended for the management and treatment of disorders of the kidney and the urinary bladder. Incontinence devices, lithotripters and renal dialysis equipment are tracked under this market.

20.6 Orthopedic Devices

Orthopedic devices are used to treat the disorders and injuries of the musculoskeletal system of human body. The orthopedic devices market covers arthroscopy, Craniomaxillofacial Fixation (CMF), joint reconstruction, orthobiologics, orthopedic accessories, orthopaedic braces and supports, orthopaedic prosthetics, orthopedic reamers, spinal surgery and trauma fixation devices.

20.7 Drug Delivery Devices

Drug delivery devices are used for administration of drug compounds in effective ways. They include both hospital and home care devices. Inhalation systems, needle-free injections and infusion systems are tracked under this market.

20.8 Diabetes Care Devices

Diabetes care devices are used in the treatment and management of diabetes. They include home and personal care use devices. Glucose monitoring devices and insulin delivery devices have been tracked under this market.
20.1.9 Wound Care Management

The wound care management market consists of dressings, equipment and other aids to prevent and treat wounds, and also quicken or promote wound healing. The wound care management market covers traditional wound management, advanced wound management, Negative Pressure Wound Therapy (NPWT), wound closure devices, ostomy drainage bags, pressure relief devices, compression therapy, tissue engineering and automated suturing devices.

20.1.10 Healthcare IT

Healthcare IT includes clinical IT systems and medical imaging information systems. These systems are used to store and share patient information between various healthcare delivery organizations, including departments in the same organization, thereby improving the flow of work and the quality of patient care and reducing the likelihood of errors. Inclusions and exclusions for market estimates - such as healthcare IT market estimates - are based on the revenues generated from the sale of clinical IT systems, software for first-time installations (license cost included), hardware for first-time installations and first-year services. It excludes revenues generated from the sale of administrative and financial IT systems, software updates, new partial installations, security updates, system integration (excluding during new installations), regular hardware maintenance and replacements, off-site-based services, solution-as-a-service products, and consulting and training services.

20.2 Acronyms

BMS: Bare Metal Stents
BRIC: Brazil, Russia, India and China
CAD: Coronary Artery Disease
CAGR: Compound Annual Growth Rate
CAPD: Continuous Ambulatory Peritoneal Dialysis
CCIE: China Center for International Economic Exchanges
CCPD: continuous cycling peritoneal dialysis
CDS: Chinese Diabetes Society
CMS: Cooperative Medical Scheme
COPD: Chronic Obstructive Pulmonary Disease
C-PACS: Chinese Picture Archiving and Communication System
CPC: Communist Party of China
CRM: Cardiac Rhythm Management
CSR: Cataract Surgery Rate
CT: Computed Tomography
DES: Drug Eluting Stent
EDL: Essential Drug List
EMR: Electronic Medical Record
ESRD: End-Stage Renal Disease
FFPE: Formalin-Fixed Paraffin-Embedded
GMP: Good Manufacturing Practice
HIS: Hospital Information Systems
HISMDS: Hospital Information Systems Minimum Data Standard
HPV: Human Papilloma Virus
Appendix

IDF: International Diabetes Federation
IMF: International Monetary Fund
IOL: Intraocular Lenses
IPR: Intellectual Property Rights
IVD: In Vitro Diagnostics
M&A: Mergers and Acquisitions
MOH: Ministry of Health
MRI: Magnetic Resonance Imaging
NCMS: New Rural Cooperative Medical Scheme
NDRC: National Development and Reform Commission
NPWT: Negative Pressure Wound Therapy
NRDL: National Reimbursement Drug List
ODM: Original Design Manufacturer
PCI: Percutaneous Coronary Intervention
PD: Peritoneal Dialysis
PMMA: Poly Methyl Metha Acrylate
PPP: Platelet Poor Plasma
PRP: Platelet Rich Plasma
PTCA: Percutaneous Transluminal Coronary Angioplasty
R&D: Research and Diagnostics
RIS/PACS: Radiology Information System/Picture Archiving and Communication System
SARS: Severe Acute Respiratory Syndrome
SDA: State Drug Administration
SFDA: State Food and Drug Administration
SPAC: State Pharmaceutical Administration of China
TCM: Traditional Chinese Medicine
UEBMI: Urban Employee Basic Medical Insurance
URBMI: Urban Residents Basic Medical Insurance
WHO: World Health Organization

20.3 Sources


Appendix


- Qiumeng L (2010) The Compensation Plan for Beijing’s Public Hospitals was Settled, and Social Interests will be the Focus. *Beijing Times*, January 17, 2010

20.4 Research Methodology

GBI Research’s dedicated research and analysis teams consist of experienced professionals in marketing and market research with consulting backgrounds in the medical devices industry and advanced statistical expertise.

GBI Research adheres to the codes of practice of the Market Research Society (www.mrs.org.uk) and the Strategic and Competitive Intelligence Professionals (www.scip.org).

All GBI Research databases are continuously updated and revised. The following research methodology is followed for all databases and reports.

20.4.1 Secondary Research

The research process begins with exhaustive secondary research on internal and external sources being carried out to source qualitative and quantitative information relating to each market.

The secondary research sources that are typically referred to include, but are not limited to:

- Company websites, annual reports, financial reports, broker reports, investor presentations and US Securities and Exchanges (SEC) filings.
- Industry trade journals, scientific journals and other technical literature.
- Internal and external proprietary databases.
- Relevant patent and regulatory databases.
- National government documents, statistical databases and market reports.
- Procedure registries.
- News articles, press releases and web-casts specific to the companies operating in the market.

20.4.2 Primary Research

GBI Research conducts hundreds of primary interviews a year with industry participants and commentators in order to validate its data and analysis. A typical research interview fulfills the following functions:

- It provides first-hand information on the market size, market trends, growth trends, competitive landscape and future outlook.
- It helps in validating and strengthening the secondary research findings.
- It further develops the analysis team’s expertise and market understanding.

Primary research involves email correspondence, telephone interviews and face-to-face interviews for each market, category, segment and sub-segment across geographies.

The participants who typically take part in such a process include, but are not limited to:

- Industry participants: CEOs, VPs, marketing/product managers, market intelligence managers and national sales managers.
- Hospital stores, laboratories, pharmacies, distributors and paramedics.
- Outside experts: investment bankers, valuation experts, research analysts specializing in specific medical equipment markets.
- Key opinion leaders: physicians and surgeons specializing in different therapeutic areas corresponding to different kinds of medical equipment.
20.4.3 Models

Where no hard data is available GBI Research uses modeling and estimates in order to produce comprehensive data sets. The following rigorous methodology is adopted:

Available hard data is cross referenced with the following data types to produce estimates:

- Demographic data: population, split by segment.
- Macro-economic indicators: Gross Domestic Product, Inflation rate.
- Healthcare Indicators: health expenditure, physicians base, healthcare infrastructure and facilities.
- Selected epidemiological and procedure statistics.

Data is then cross-checked by the expert panel.

All data and assumptions relating to modeling are stored and are available to clients on request.

20.4.4 Forecasts

GBI Research uses proprietary forecast models. The following four factors are utilized in the forecast models:

- Historic growth rates.
- Macro indicators such as population trends and healthcare spending.
- Forecast epidemiological data.
- Qualitative trend information and assumptions.

Data is then cross-checked by the expert panel.

All data and assumptions relating to modeling are stored and are available to clients on request.

20.4.5 Expert Panels

GBI Research uses a panel of experts to cross verify its databases and forecasts.

GBI Research’s expert panel comprises marketing managers, product specialists, international sales managers from medical device companies; academics from research universities, KOLs from hospitals, consultants from venture capital funds and distributors/suppliers of medical equipment and supplies.

Historic data and forecasts are relayed to GBI Research’s expert panel for feedback and adjusted in accordance with this feedback.
20.6 Disclaimer

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