

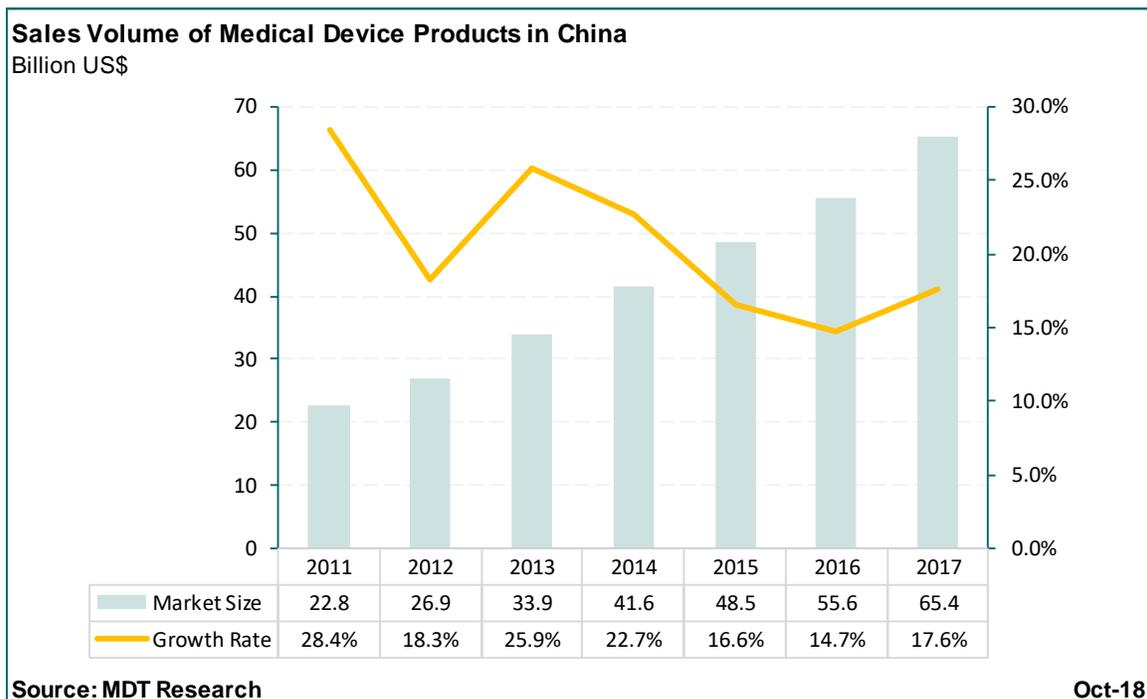
## Half Year Review of China MedTech Industry

### - Attractive Enough with Significant Growth in 2018

by Owen Tang at G-MedTech.com

China has already been one of the most important medtech markets in the world with total sales volume of medical device products of US\$ 65.4 billion in 2017, according to the report China MedTech Industry Yearbook which was published by MDT Research in June 2018, the research unit of G-MedTech.com.

China medtech industry had kept compound annual growth rate of 20.5% from 2011 to 2017 and what will it be in 2018? Based on our tracking and analysis of government policies, healthcare data, performance and strategic actions of both local players and multinational players in the first half of 2018, we can see that China medtech industry is still attractive enough with significant growth.



## Local Players

After tracking ten local public medical device companies which had released their half year report in August, we found that eight of them had kept revenues growth in the first half of 2018, ranging from 3.2% to 39.4%. These companies cover the key medtech market segments such as medical imaging equipment, orthopaedics, cardiovascular devices, patient monitoring, and homecare devices.

<b>Financial Data of China Public Medical Device Companies</b>					
Million RMB, 1st Half of 2018					
Company	Key Segments	Revenues	Growth-%	Net Profit	Growth-%
WeGo Group	Orthopaedics, Cardiovascular Devices	4,150	39.4%	650	0.0%
Lepu Medical	Cardiovascular Devices	2,955	35.4%	810	63.5%
Sonoscape	Ultrasound, Endoscopy	541	27.6%	118	60.2%
Kinetic Medical	Orthopaedics	457	24.6%	111	16.8%
BioLight Meditech	Patient Monitoring	389	20.7%	34	-11.1%
Yuyue Medical	Respiratory, Homecare	2,223	19.4%	470	18.0%
Edan Instruments	Patient Monitoring, ECGs	488	16.4%	634	30.0%
Wandong Medical	MR, DR, DSA, CT	380	14.9%	46	40.5%
Shinva Medical	Surgical, Infection Control	4,641	3.2%	57	-32.2%
David Medical	Infant Incubators	128	-10.0%	25	-33.3%
Andon Health	Blood Pressure Monitors	267	-18.4%	-46	4.4%

**Source: MDT Research** **Oct-18**

Mindray started trading on the Shenzhen Stock Exchange on October 16<sup>th</sup> 2018 with 121.6 million shares offered at RMB 48.80 per share. With 44% growth at the first trading day, its market value reached RMB 85.4 billion and it has been strongly expected to reach RMB 100 billion soon. In 2017 Mindray had reached sales revenues of RMB 11.2 billion and around 50% of which was contributed by overseas sales. In the first three months of 2018 its overseas business contributed revenues of RMB 1,292 million which only accounted for 40% of the total. In 2017 among its all 39 overseas subsidiaries half of them were unprofitable especially in the regions of Hong Kong, USA, France, UK, and Germany. Mindray will still focus on overseas business and try to be one of the top 10 medical device companies in terms of annual revenues in the next 3 to 5 years, according to Mr. Li Xiting, Chairman at Mindray.

After raising RMB 3,333 million in September 2017, Shanghai-based United Imaging Company launched a series of new medical imaging products at China Medical Equipment Fair (CMEF 2018 Spring) and expanded to medical AI area. It has also won several national projects to develop 5.0T MR system, low-dose DSA equipment, low-dose mammography equipment, and 3.0T MR system for pediatric application. It has been actively expanding local market via a series of partnerships, including establishing AI medical imaging system for 40 Traditional Chinese Medicines (TCM) hospitals and establishing comprehensive strategic partnership with Tongji Hospital in Wuhan city.

United Imaging was estimated to be valued at US\$ 5 billion and would probably go public in the future.

Another leading local player Neusoft Medical which had developed China's first CT equipment just celebrated its 20<sup>th</sup> anniversary in August 2018 and launched two new products, NeuViz Glory CT & NeuAngio 30C DSA. It is actively expanding overseas business especially in Africa, Middle East, East Europe, and South America where its NeuViz 128 had been installed at a hospital in Peru. Since launching its first CT in Argentina in 2004, Neusoft Medical now covers 17 countries in South America.

In April 2018 Italian medical imaging equipment manufacturer Esaote SpA announced the completion of the acquisition by a Consortium of leading Chinese investors including three medical device manufacturers Yuyue, Wandong, and Kangda. Following Mindray's overseas acquisitions of Datascope in 2008 and Zonare in 2013, China medical device players are now actively expanding global business via M&As. The top cases include MicroPort's acquisition of Wright Medical in 2014, Bluesail's acquisition of Biosensors International, and Wego Group's acquisition of Argon Medical.

## Multinational Companies

Multinational medical device companies have still been actively expanding China business especially via localization strategy in the first half of 2018, including establishing local facilities, looking for partnerships, launching new products, as well as promoting local talents.

Medtronic is to open Chengdu Innovation Center in Sichuan province in 2020 which will provide a leading, cross-disciplinary clinical training and research platform for medical workers in Sichuan and other central and western regions. It also partnered with China's National Center for Cardiovascular Diseases to push international communications and partnerships, support public hospital reform, as well as commercialize and industrialize science and technology achievements. Early in 2015 Medtronic established investment fund with several partners in China to invest local medtech start-ups. In February 2018 Alex Gu was named President of Medtronic's Greater China Region. He will also take on additional responsibilities for regional growth initiatives, leading the business development, medical and clinical affairs, emerging markets/private hospitals, and R&D functions in Greater China.

In December 2017 Johnson & Johnson launched a new Johnson & Johnson Innovation, JLABS in Shanghai which will open in Q2 2019. JLABS @ Shanghai will be the first JLABS location established outside of North America and will accommodate up to 50 life science and healthcare startups, both single entrepreneurs and larger companies, focused on innovations across the entire healthcare spectrum, including pharmaceuticals, medical devices and consumer. In June 2018 Johnson & Johnson launched the Shanghai Lung Cancer Innovation QuickFire Challenge which seeks to identify cutting-edge, early-stage innovation from around the world that addresses all

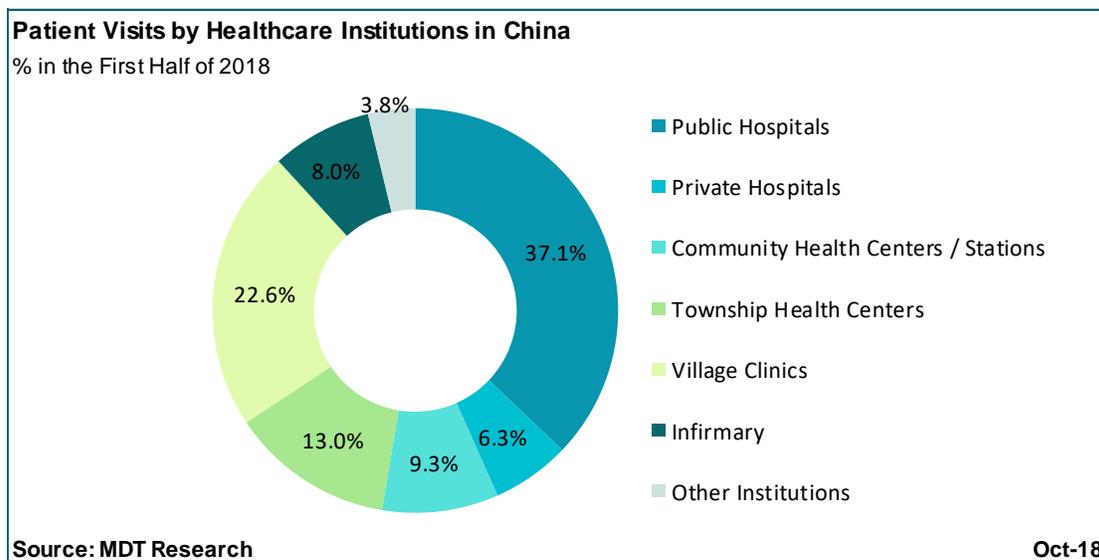
stages of lung health. With total investment of US\$ 180 million, Johnson & Johnson is to build a New Ethicon Factory in Suzhou city which will be put into operation in 2019.

In May 2018 Philips and China National Commission of Stroke Prevention and Control signed strategic partnerships under which the two sides will collaborate on scientific research, education, trainings, academic communications, as well as supporting prevention and control work around China. Just one month ago Philips established an AI lab in Shanghai which will carry out AI projects such as natural language processing, big data mining & analysis, AI-based medical imagine, supporting precision medicines, as well as combining hospital and family with AI technologies.

In June 2018 GE Healthcare announced establishment of Institute of Precision Medicine (IPM) which will cover three research centers, Biomedical Research Center, AI Research Center, and Precision Medicine Imaging Research Center. Just a week ago GE Healthcare established strategic partnership with Wanma Technology for breast cancer screening via automated breast ultrasound system (ABUS). Wanma Technology will establish more than 30 ABUS Diagnostic Centers around China in the next three years, while GE Healthcare will provide related diagnostic imaging services to both private and public hospitals.

## Healthcare Resources

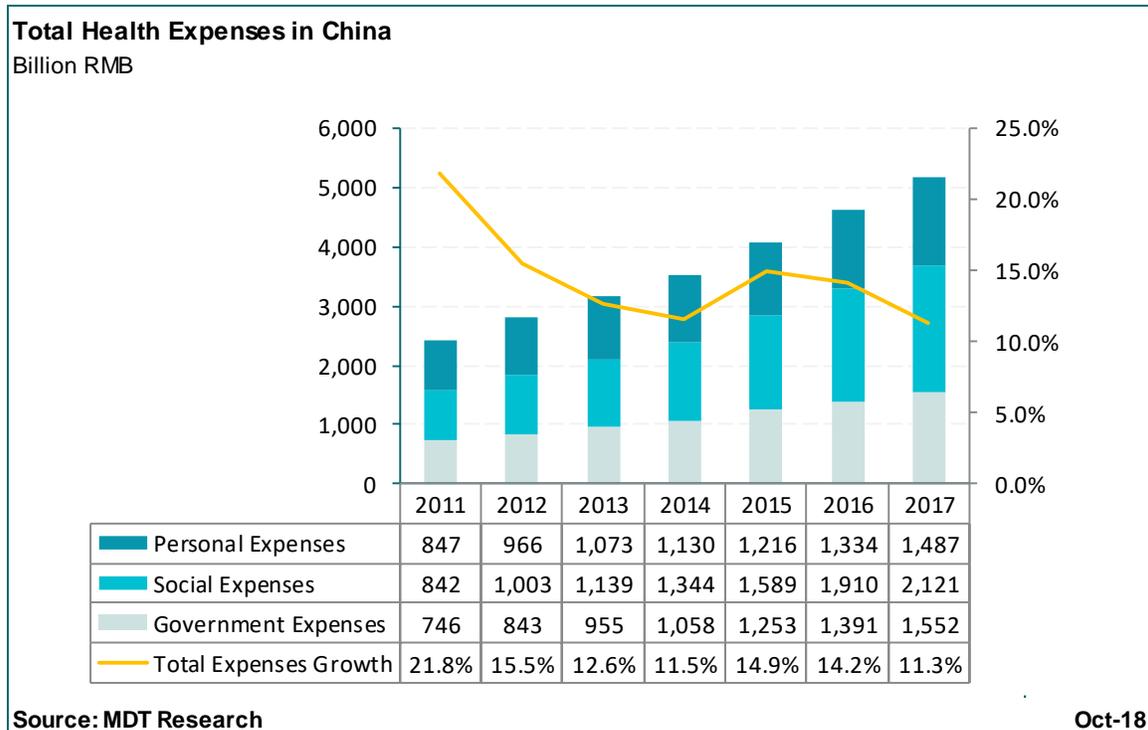
There were total 998,000 healthcare institutions in China by June 2018, representing a year growth of 0.84%. There were total 32,000 hospitals in China including 12,121 public hospitals and 19,589 private hospitals. Number of public hospitals decreased 445 while private hospitals increased 2,436. In terms of grassroots healthcare institutions, number of community health centers increased while numbers of township health centers and village clinics decreased.



Total patient visits in the first half of 2018 reached 4,070 million, representing annual growth rate of 3.8%. Although patient visits to private hospitals increased 16.9%, public hospitals are still the

main medical services providers in China which accounted for 37.1% of total patient visits. Being composed of community health centers, township health centers, and village clinics, grassroots healthcare institutions accounted for 53.6% of total patient visits which makes it critical in China's healthcare system.

China total health expenses increased from RMB 2,435 billion in 2011 to RMB 5,160 billion in 2017, representing CAGR of 13.6%. Social expenses, government expenses, and personal expenses accounted for 41.1%, 30.1%, and 28.8% of the total respectively. Health expenses per capita reached RMB 3,712 in 2017, representing annual growth of 10.8%.



## To be Focused

Health expenses in China still keep increasing and local innovative medical device products will be supported as a way of replacing imported ones which could reduce health costs. The fourth list of local excellent medical equipment was released in September 2018, covering more product types and manufacturers. Currently there are many guidelines from central government and provincial governments that require hospitals to purchase local medical device products with priority and limit procurement of imported ones. With tracking bidding data of medical device products, it is quite clear that local players had won more biddings especially in the area of ultrasound and digital radiography equipment in the first half of 2018. These players include Mindray, Shanghai United Imaging, Wandong, VINNO, and Sonoscape.

After covering all provinces in China for drug distribution, the Two-Invoice System will cover more provinces for distribution of high-value medical consumables, and even low value medical consumables in some provinces in more and more provinces and will impact the distribution channels. There are around 180 thousand companies in medical device distribution area and most of them are small scale with only covering several local hospitals. The Two-Invoice System will impact the distribution channels and medical device manufacturers have to readjust their distribution strategies accordingly.

Focusing on overseas business China leading players will identify more targeted companies for partnerships, investments and even acquisitions. China's investments in Israeli medtech start-ups had kept growing these years.

Artificially intelligence in medtech especially in medical imaging area should be focused. There are many medtech AI startups in China which had got significant investments. Leading players are quite active in expanding medtech AI opportunities. In April 2018 Philips established AI lab in Shanghai with focusing on medical imaging, patient monitoring, healthcare IT, and personal healthcare. Shanghai United Imaging launched uAI platform which will enable imaging and radiotherapy equipment and the uCloud to assist doctors with efficient and precise diagnosis and treatment.

Grassroots healthcare market and private healthcare market are still the most attractive segments with great potential. With the aim of maintaining their sustainable growth in China, multinational players will keep their focus on this segment and we can see that GE Healthcare, Philips, and Carestream were quite active in the first half of 2018. With China's pushing hierarchical medical system, more medical consortiums will be established and county-based hospitals and township health centers will be supported on chronic diseases management, upgrading of medical equipment, as well as education of medical professionals.

Rather than acquisition of local players, multinational companies now are more willing to deepen local presence, establish local centers and partner with associations, government departments and hospitals. Many education projects and public benefits projects will also be provided. In the first half of 2018 Chinese native talents at some multinational companies were promoted to take more responsibilities for localization strategy.

The overall perspectives of China medtech industry are quite active in the first half of 2018, covering policies, investments, and both local and multinational players' strategic actions and performance. Based on our tracking China medtech industry in the remaining of 2018 we will present the updated China MedTech Industry Yearbook report at earlier 2019, which will cover more details of policies, data, analysis and insights.

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## about Us

Formerly known as ChinaBionews, MDT Research is dedicated to providing market intelligence and consulting services with a focus on China medtech industry.

MDT Research is now the research unit of G-MedTech.com which is the global medtech platform for valuable industry information including breaking news, company press releases, and any announcements.

With more than 10 years of market research and consulting experiences in medtech industry, Owen Tang is co-founder at G-MedTech.com and principal analyst at MDT Research. Based in Shanghai Owen is responsible for market research & consulting projects, newsletters, and articles about China medtech industry.

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