

The opportunities and challenges of Chinese medical equipment industry development

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Abstract –With the rapid development of the economic development of our country and the increase of its overall strength, China's medical equipment market size expanded rapidly, the new problems and new contradictions are increasing and complex. What is more, medical equipment safety risk increase, the government supervision is relatively insufficient, especially in medical equipment product registration and entry and the exit aspects should be strengthened.

Keywords –Medical devices; Development; Opportunities; Challenges

1. Introduction

Along with the rapid development of science and technology, medical instruments electronic, automation degree is more and more high, the type also more and more. It has become one of the important signs of hospital modernization, but also ensure the hospital smoothly carry out the medical treatment, teaching and scientific research of the important material foundation and necessary modern tools. China is a medical equipment industry to emerging market, attracting global medical equipment industry eyeball, scrambling to enter the Chinese market. At the same time, local enterprises small in scale, technology is weak, the lack of development in the future, there exists the domestic market share is low, the international competitiveness problems such as weak.

2. The current situation of the development of medical devices in China

2.1. The industry scale

With the rapid development of the economic development of our country and the increase of its overall strength, the health cause enormous development. Chinese medical health spending is 480.418 billion yuan, a year-on-year increase of 20.3%, accounting for 5.3% of the national fiscal expenditure. And the people's livelihood in spending most education aggregate expenditure for 1.255002 trillion yuan, accounting for 14% of the national fiscal expenditure. In 2010, the number of medical institutions reached 92.9. The

establishment of China's urban worker medical treatment to ensure a system, rural cooperative medical care pilot work, the elderly and children and farmers' medical security system construction are propulsion, residents life expectancy has risen steadily. Medical equipment is the pharmaceutical industry is an important component in the medical equipment industry scale unceasingly expands, for our country the development of public health undertakings made outstanding contributions.

According to the national bureau of statistics figures, in 2010 China's medical equipment gross industrial output value reached 67.7 billion yuan, up have the growth of 24%, growth is strong. But with the global medical devices \$250 billion over the same period, compared the proportion of our country is only 2% ~ 3%. With China's 25% of the world's population compared with very not harmonious, but also shown great potential market. It is estimated that by 2015, China medical equipment output will reach 100 billion yuan, in the world medical equipment market share will make up to 10%.

2.2. Development speed

In recent years' medicine export market recession, China's medical equipment maintained about 14% rate of development, the export growth rate above 20%. Domestic medical equipment export remain stable growth of the good momentum and is one of the reasons the scientific and technological content of the products constantly improve, especially after China's research and development of high-tech products recognized. The next five to seven years, China will exceed Japan, to become the world's second largest medical equipment market.

Exports in 2007 increased 23% year-on-year to us \$8.421 billion, according to customs statistics, 2008 medical equipment import and export totaled us \$16.283 billion, including exports to 11.067 billion us dollars, up 31%, the trade surplus of \$5.851 billion. In 2009, China medical equipment export to continue rapid growth, the

export volume up to 12.245 billion us dollars, up by 11%, Imports increased 15.32% year-on-year to us \$6.105 billion. In 2010, China medical equipment import and export import and export value increased 17.57% year-on-year to us \$22.656 billion, see table 1.

Table 1. Chinese medical equipment import and export statistics

Year	2005	2006	2007	2008	2009	2010
Imports	36.31	36.81	42.80	52.16	61.05	79.57
Exports	53.43	68.71	84.21	110.67	122.45	146.99
General trade imports	21.2	20.8	22.7	26.4	30.4	46.36
General trade exports	24.3	36.9	43.1	63.9	83.1	55.0

2.3. Technical level

On the whole, China's medical equipment industry innovation ability strengthens, from the past imitation is given priority to, gradually change to independent research and development. The level of equipment and product technical level continuously improve, but the core technology and patent still cannot overstep.

In the past ten years, China's medical equipment industry products technical structure, product quality have undergone great changes, especially the patient monitoring products, medical imaging equipment, clinical laboratory instrument equipment and minimally invasive interventional treatment for product change significantly, at the same time appeared stereotaxic ultrasonic focusing treatment system, excimer laser eye aberration correction system, body of rotary gamma knife, sleep monitoring system, and so on a number of fully independent intellectual property rights of innovative products. In medical imaging equipment product categories, five medical imaging equipment varieties in addition to nuclear medical imaging equipment PET, SPECT outside, at present there are domestic product batch listed. In product quality, with the ISO9000 quality system certification and product certification, the implementation of enterprise quality consciousness needs further improve. Up to now, we have hundreds of enterprise from the Chinese quality system authentication certificate or foreign ISO9000 or CE certification. The improvement of the quality of products, and enhance enterprise competition in the global market confidence, medical apparatus and instruments exports grew, high-tech medical equipment products in the medical devices in exports a larger proportion.

2.4. R&D

Medical equipment industry is a multidisciplinary cross, knowledge intensive, capital intensive; the rapid development of high technology industries, high-tech product development must high risk and high investment. In 2005, the whole pharmaceutical industry research and development investment accounted for the proportion of sales income of average is only 1.02%, in addition to the individual enterprises in more than 5% outside, most of the enterprise's R&D investment proportion in a very low

level. At the same time, the domestic venture capital market is yet to be established, the whole technical innovation system of the intermediate links appear serious fracture. At present, our country medicine research and development of the subject is still scientific research institutions and institutions of higher learning, large and medium-sized enterprises set up inside the proportion of scientific research institutions is only 50%. At the same time, in the market-oriented pharmaceutical enterprises, mainly engaged in scientific research personnel is technical renovation work, because of talent evaluation mechanism and incentive mechanism is not sound, in to the urge of economic interest, there are scientific talents management field to shunt phenomenon, make careful cultivation of scientific research personnel fails to become a new drug development and technology innovation backbone. Due to lack of professional and technical personnel and scientific research supporting conditions, most of the enterprise can not become the subject of medicine research and development, make some key technology industrialization of long-term no breakthrough, restricted the industry to high technology, high value-added downstream processing products field outspread; Upgrade of products is slow, not in time to catch up with and meet the demand of market.

Although our country medical equipment industry has from blunt imitate, after tracking reference to independent innovation towards the kbe step, and for the future development of laying a good foundation, but compared with developed nations, there are a lot of gap, especially the high-end product of some key technologies and key technology is not completely master, some high-performance sensor and information collection and processing unit still need to import, this is the domestic medical equipment industry to "soft rib", also is the large domestic medical equipment total can't keep up with the pace of foreign products upgrading main reason.

3. Problems of the medical equipment industry

Chinese medical instrument association JiangFeng summarizing our medical devices industry characteristics, it is the industry sustained growth, but from a global look at industry scale is still small, The second is to strengthen innovation ability, but the key parts of it relies on import,

high-end products still with imitation, improve the Lord; Three is the product technical level continuously improve, but export is still low technical content of small and medium-sized product mainly; Four is the production enterprise quantity continuously increased, but the technology, the scale, the brand competitiveness is relatively weak, especially the core technology to become a domestic enterprise can't around an obstacle; 5 it is market demand, but structure remains to be adjusted, self-discipline, standardizing management and enterprise honesty, still need to strengthen. On the whole, on the one hand, medical equipment market size expanded rapidly, the new problems and new contradictions increasing and complex. On the other hand, medical equipment safety risk increase, the government supervision is relatively insufficient investment, especially in medical equipment product registration and entry and exit aspects to be strengthened.

4. Suggestions

China's population has reached 1.3 billion, 60 years old aging population 133 million, accounting for 10.2% of the total population, and rising at an annual rate of 3%. China's industrialization is not yet complete period is entered the aging countries club. It is estimated that by 2020, China's urbanization ratio will rise to 50%, about 300 million the rural population into urban population. "11th five-year plan" period, our country's population will continue to grow, an aging population and the rapid development of urbanization, to the development of the medicine industry put forward higher request, also provide a broader space for development.

4.1. Play a positive role in industry association

Pay great attention to the implementation the general office of the state council about accelerate industry association chamber of commerce reform and development certain opinions ", particularly in the information data, bridge bond, system services, trade promotion, self-discipline, to play a bigger role.

4.2. Strengthen clinical test and training base construction

Promote the standardization of clinical trials, speed up new product clinical work, and promote the use of product safety.

4.3. Strengthen the construction of national standard and professional standard

Promote the standardization of clinical trials, speed up new product clinical work, and promote the use of product safety.

4.4. Improve the quality of raw materials and components

Our country's basic industrial weak become affect domestic medical equipment product quality important

reason. The stability of raw materials, precision machining, the key parts will severely affect product quality and class.

4. Conclusions

In the early stage of industrialization in our country has entered the aging society in advance. In 2010, the state in the rural health service system in construction projects with total investment will reach more than 200 yuan RMB, the equipment configuration for the investment of about 30%. In addition, at present the national medical and health institutions of medical instrument and equipment, 15% the left and right sides is the 1970 s around products, 60% is the mid 1980 s previous products, they renewal process is a demand release process, will ensure that the next 10 years or even a longer period of time China's medical equipment market fast growth.

Along with the hospital to high-end medical equipment product demand increased, the development of grassroots health services to low and medium-grade market pull, patients on health care asks is ceaseless rise, and the rapid growth of exports, China's medical equipment industry will usher in a new round of great-leap-forward development: production enterprise and registration number of product rapid growth; The market for single equipment, conventional equipment demand growth, domestic large scale equipment market demand is equal to or growth; Import and export trade growth, the domestic market competition is becoming more fierce, high-end product production and export increase; Enterprises pay more attention to improve the technical content and result turn.

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Vitae

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