Healthcare Financing and the Pharmaceutical Innovation in China

Submitted by: China Pharmaceutical Industry Research and Development Association (SINO-PhIRDA)
China has become a big economy in the world.

Healthcare needs are increasing rapidly.

The government is investing more and more funds into the healthcare.

The pharmaceutical industry is growing largely.
Background

- Serious diseases
  - Breaking out
- And a lot of loss has happened.

- Cancer
- Hypertension
- HBV
- Alzheimer's disease, AD

Uneven Distribution of Medical Resources

<table>
<thead>
<tr>
<th></th>
<th>Medical institutions beds per thousand population</th>
<th>Top three hospitals per million population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing</td>
<td>6.99</td>
<td>2.18</td>
</tr>
<tr>
<td>Shanghai</td>
<td>5.13</td>
<td>1.17</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>5.55</td>
<td>3.43</td>
</tr>
<tr>
<td>Henan</td>
<td>4.06</td>
<td>0.59</td>
</tr>
<tr>
<td>Guizhou</td>
<td>2.39</td>
<td>2.55</td>
</tr>
<tr>
<td>Qinghai</td>
<td>1.01</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>0.21</td>
<td>0.90</td>
</tr>
</tbody>
</table>

医疗机构床位数/每千人口  三甲医院数/每百人口

|                      | Beijing              | Shanghai             | Zhejiang             | Henan                | Guizhou              | Qinghai              |  |
Methodology on health financing

- The problem of health financing shall be considered from the angle of macro-economy.

- The global history shows that poverty is always closely related with diseases. Therefore, investment on the health is the guarantee for the constant increase of the economy.

- The character of pharmaceutical industry shall be valued properly. (social cause and economic activity)

State funding for R&D of new drugs has increased each year

During the "Ninth Five-Year Plan" period, State input "Project 1035" 180 million Yuan and drive local governments, enterprises invested nearly 600 million Yuan, obtained a certificate for a first class of new drugs, set up 23 technology platform for third class of new drugs.

- During the “Tenth Five-Year Plan” period, a major national scientific and technological special project of “Innovative New Drugs and Modernization of Traditional Chinese Medicine” devoted a total of 850 million Yuan, led local governments, enterprises invested 2.6 billion Yuan, obtained 15 new drugs certificates of first class, set up 61 technology platform.

- Bio pharmaceutical has been put at the status of priority.
China Pharmaceutical Industry under the International Financial Crisis

<table>
<thead>
<tr>
<th>Categories</th>
<th>Total Value (100 M RMB)</th>
<th>Increase(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Raw Medicine</td>
<td>1687.3</td>
<td>25.0</td>
</tr>
<tr>
<td>Chemical Preparation</td>
<td>2107.9</td>
<td>23.0</td>
</tr>
<tr>
<td>Chinese patent medicine</td>
<td>1601.5</td>
<td>22.9</td>
</tr>
<tr>
<td>Decoction Pieces</td>
<td>366.5</td>
<td>33.6</td>
</tr>
<tr>
<td>Biochemical Product</td>
<td>697.1</td>
<td>30.9</td>
</tr>
<tr>
<td>Medical device</td>
<td>672.5</td>
<td>32.8</td>
</tr>
<tr>
<td>Sanitation material and supply</td>
<td>354.0</td>
<td>40.8</td>
</tr>
</tbody>
</table>

China’s pharmaceutical industry still faces severe situation

- Pharmaceutical industry is one of the most competitive high-tech industries in the world.
- In Europe, the United States and Japan and other developed countries, the pharmaceutical industry is the fourth largest profitability industry, in 2006 the world’s pharmaceutical industry output value amounted to 70 billion U.S. dollars and the profit was on the top of margin, but all the total sales of the domestic pharmaceutical enterprises was not exceed Pfizer in the United States.
- China’s 2006 pharmaceutical industrial output value is 460.8 billion Yuan, accounted for only 8.5 percent of the world.
- Transnational pharmaceutical companies have entered in China, they purchase the acquisition of new drug research and development, employ outstanding talent, our research and development of new drugs and pharmaceutical industry is facing severe challenges.
China's pharmaceutical industry still faces severe situation

Lack of capability and potential of innovation has led to less outcome of IP products and becomes the constraints of our pharmaceutical industry developing towards downstream fields of hi-tech and high added value. The low speed of upgrade of products makes the pharmaceutical products lagged behind the need of market and located at low-end in the international division of labor in medicine. The result is that China's pharmaceutical industry has occupied less share of international market and the main part of inner market of hi-tech medical products has been controlled by imports and joint venture.

China's policies to promote pharmaceutical industry

1. Long and Medium State Programme on Science and Technology Developing (2006-2008)
2. Five-year Plan on Bioechnology Developing (2007)
3. Special Schedule on New Drug Creation (2008-2020)
4. Specific Measures issued by the State Council
The goal of process medical system innovation — General goal

1. Aim at major diseases those seriously endanger the health of the people, develop efficacy, low side effects, cheap drugs provide safe, effective, convenient and inexpensive medical and health services to meet the growing health and medical needs of people.

2. Relying on the Yangtze River Delta, the Pearl River Delta, Bohai Sea, such as technology and the advantages of regional industry, build national drug innovation system; foster a high level of training professional personnel for innovative drug research and development to provide technical support.

3. Explore and build in line with China's national conditions effective drugs developed by innovative new ways and new mechanisms.

Three directions

- Inherit and develop the characteristics and advantages of traditional Chinese medicine (TCM), speed up the process of TCM modernization, make our TCM innovation research to be international advanced level.

- Focus on the development of biotechnology products such as humanized treatment antibody, strive to achieve more research breakthroughs and reach international advanced level.

- Explore new model of innovation to promote the chemical drug research and development by leaps and bounds, make the comprehensive ability and level of chemical drug research and development close to the international advanced level.
Three steps

1. First step
   From 2008 to 2010 – innovation model in transition phase: the formation of the basic national drug innovation system.

2. Second step
   From 2011 to 2015 - rapid growth phase: a major new drug research and development technology to achieve the basic norms of international practice, significantly raise the level of research and development, and significantly narrow the gap with the developed countries.

3. Third step
   From 2016 to 2020 - across the stage of development phase: the comprehensive ability and level of new drug’s research and development is close to the international advanced level.

Expected Results

- The formation of the national innovation system drugs, new drug research and development of the comprehensive ability and level close to the international advanced level, into the ranks of the powerful new drug research and development.

- Enterprises have become the main body of technological innovation, the pharmaceutical industry dominated by the imitation to innovation-based development across.

- In order to protect people's health, and promote the development of the national economy to make a significant contribution.
Opportunities created by the reform of healthcare system

- The market capacity will be enlarged greatly. (establishment of the healthcare system for all the citizens)
- The generic drug industry will be faced up with a brighter future for the sake of Essential Drug Programme.
- The market mechanism will be put in a higher status.

Challenges posed by the reform of healthcare system

- The Essential Drug Programme: the issue of pricing
- The separation of hospitals and pharmacy has a long way to go.
- The procurement activities in local area has split the inner market of China
Thanks for your attention!