Situation and Countermeasures of Noncommunicable Disease Prevention and Control in China

Wang Longde
Contents

• Epidemic trend of NCDs in China
• Major problems of NCDs control and prevention
• Thoughts and suggestions of NCDs control and prevention policy and strategy adjustment
• Exploration in stroke control and prevention
1. Epidemic trend of NCDs in China
Severe situation

• China's NCDs accounted for 86.6% of total deaths in 2012 (73.8% in 1991, 80.9% in 2000)

• As the primary cause of death, cerebrovascular disease accounted for 51% of NCDs deaths, and accounted for 44.2% of total deaths (34.0% and 41.4% in 2000, respectively)

• The prevalence of hypertension among adults over 18 was 25.2% in 2012 (18.8% in 2002), the prevalence of diabetes was 9.7% (2.6% in 2002)

### China’s Leading Causes of Deaths 2004-2005

<table>
<thead>
<tr>
<th>Disease</th>
<th>Mortality (1/100K)</th>
<th>Composition (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>608.78</td>
<td>100.00</td>
</tr>
<tr>
<td>1 Stroke</td>
<td>136.64</td>
<td>22.45</td>
</tr>
<tr>
<td>2 Malignant tumor</td>
<td>135.88</td>
<td>22.32</td>
</tr>
<tr>
<td>3 Respiratory diseases</td>
<td>96.28</td>
<td>15.81</td>
</tr>
<tr>
<td>4 Cardiac disease</td>
<td>90.23</td>
<td>14.82</td>
</tr>
<tr>
<td>5 Injury and poisoning</td>
<td>61.51</td>
<td>10.10</td>
</tr>
<tr>
<td>6 Digestive system disease</td>
<td>16.78</td>
<td>2.76</td>
</tr>
<tr>
<td>7 Infectious diseases</td>
<td>13.29</td>
<td>2.18</td>
</tr>
<tr>
<td>8 Metabolic disease</td>
<td>10.77</td>
<td>1.77</td>
</tr>
<tr>
<td>9 Disease of the genitourinary system</td>
<td>8.75</td>
<td>1.44</td>
</tr>
<tr>
<td>10 Perinatal disease</td>
<td>5.42</td>
<td>0.89</td>
</tr>
<tr>
<td>Total</td>
<td>94.54</td>
<td></td>
</tr>
</tbody>
</table>


Gonghuan Yang*, Yu Wang*, Yixin Zeng, George F Gao, Xiaofeng Liang, Maigeng Zhou, Xia Wan, Shicheng Yu, Yuhong Jiang, Mohsen Naghavi, Theo Vos, Haidong Wang, Alan D Lopez, Christopher J L Murray

Findings The leading causes of death in China in 2010 were stroke (1.7 million deaths, 95% UI 1.5–1.8 million), ischaemic heart disease (948 700 deaths, 774 500–1 024 600), and chronic obstructive pulmonary disease (934 000 deaths, 846 600–1 032 300). Age-standardised YLLs in China were lower in 2010 than all emerging economies in the G20, and only slightly higher than noted in the USA. China had the lowest age-standardised YLD rate in the G20 in 2010. China also ranked tenth (95% UI eighth to tenth) for HALE and 12th (11th to 13th) for life expectancy. YLLs from neonatal causes, infectious diseases, and injuries in children declined substantially between 1990 and 2010. Mental and behavioural disorders, substance use disorders, and musculoskeletal disorders were responsible for almost half of all YLDs. The fraction of DALYs from YLDs rose from 28.1% (95% UI 24.2–32.5) in 1990 to 39.4% (34.9–43.8) in 2010. Leading causes of DALYs in 2010 were cardiovascular diseases (stroke and ischaemic heart disease), cancers (lung and liver cancer), low back pain, and depression. Dietary risk factors, high blood pressure, and tobacco exposure are the risk factors that constituted the largest number of attributable DALYs in China. Ambient air pollution ranked fourth (third to fifth; the second highest in the G20) and household air pollution ranked fifth (fourth to sixth: the third highest in the G20) in terms of the age-standardised DALY rate in 2010.

## Top ten causes in 2013 of years of life lost by location

<table>
<thead>
<tr>
<th>Rank</th>
<th>Global</th>
<th>Developed</th>
<th>Developing</th>
<th>High-income Asia Pacific</th>
<th>Brunei</th>
<th>Japan</th>
<th>Singapore</th>
<th>South Korea</th>
<th>High-income North America</th>
<th>Canada</th>
<th>USA</th>
<th>Southern Latin America</th>
<th>Argentina</th>
<th>Chile</th>
<th>Uruguay</th>
<th>Western Europe</th>
<th>Andorra</th>
<th>Austria</th>
<th>Belgium</th>
<th>Southeast and East Asia and Oceania</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IHD</td>
<td>LRI</td>
<td>Stroke</td>
<td>Diarrhoea</td>
<td>Road injuries</td>
<td>HIV/AIDS</td>
<td>NN preterm</td>
<td>Malaria</td>
<td>NN encephalitis</td>
<td>Congenital</td>
<td>Road injuries</td>
<td>Diabetes</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Stroke</td>
<td>COPD</td>
</tr>
<tr>
<td>2</td>
<td>LRI</td>
<td>IHD</td>
<td>Stroke</td>
<td>Diarrhoea</td>
<td>HIV/AIDS</td>
<td>NN preterm</td>
<td>Malaria</td>
<td>Road injuries</td>
<td>NN encephalitis</td>
<td>Congenital</td>
<td>Road injuries</td>
<td>Diabetes</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Stroke</td>
<td>COPD</td>
</tr>
<tr>
<td>3</td>
<td>High-income</td>
<td>Stroke</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Alzheimer’s</td>
<td>Cirrhosis</td>
<td>COPD</td>
<td>Colorectal C</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Diabetes</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Stroke</td>
<td>COPD</td>
</tr>
<tr>
<td>4</td>
<td>Australasia</td>
<td>Stroke</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Colorectal C</td>
<td>Alzheimer’s</td>
<td>COPD</td>
<td>Colorectal C</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Diabetes</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Stroke</td>
<td>COPD</td>
</tr>
<tr>
<td>5</td>
<td>Australia</td>
<td>Stroke</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Alzheimer’s</td>
<td>Colorectal C</td>
<td>COPD</td>
<td>Colorectal C</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Diabetes</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Stroke</td>
<td>COPD</td>
</tr>
<tr>
<td>6</td>
<td>New Zealand</td>
<td>Stroke</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Alzheimer’s</td>
<td>Colorectal C</td>
<td>COPD</td>
<td>Colorectal C</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Diabetes</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>LRI</td>
<td>Road injuries</td>
<td>Stroke</td>
<td>COPD</td>
</tr>
<tr>
<td>7</td>
<td>High-income Asia Pacific</td>
<td>Stroke</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Stomach C</td>
<td>Liver C</td>
<td>Colorectal C</td>
<td>Cirrhosis</td>
<td>COPD</td>
<td>Breast C</td>
<td>COPD</td>
<td>Liver C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Brunei</td>
<td>Stroke</td>
<td>Diabetes</td>
<td>Road injuries</td>
<td>Congenital</td>
<td>Lung C</td>
<td>LRI</td>
<td>HIV/AIDS</td>
<td>COPD</td>
<td>Colorectal C</td>
<td>Diabetes</td>
<td>Stroke</td>
<td>Self harm</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>LRI</td>
<td>Stroke</td>
</tr>
<tr>
<td>9</td>
<td>Japan</td>
<td>Stroke</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Stomach C</td>
<td>Liver C</td>
<td>Colorectal C</td>
<td>Self harm</td>
<td>COPD</td>
<td>Liver C</td>
<td>Colorectal C</td>
<td>COPD</td>
<td>Breast C</td>
<td>COPD</td>
<td>Liver C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Singapore</td>
<td>Stroke</td>
<td>LRI</td>
<td>Stroke</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Self harm</td>
<td>Lung C</td>
<td>Colorectal C</td>
<td>Self harm</td>
<td>COPD</td>
<td>Liver C</td>
<td>Colorectal C</td>
<td>COPD</td>
<td>Breast C</td>
<td>COPD</td>
<td>Liver C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Toward a Healthy and Harmonious Life in China: Stemming the Rising Tide of Non-Communicable Diseases
— World Bank Report, July 26, 2011

- The number of NCD cases (CVDs [myocardial infarction and stroke], COPDs, DM, and lung cancer) among Chinese people over 40 will double or even triple over the next two decades.

- The rapid growth of NCDs mainly occurs in the next decade.

- About 50 percent of NCDs burden occurs in people under the age of 65.

- Stroke has the largest health and well-being impact on an individual.
Severe situation of stroke control and prevention in China

- Predicted by the World Bank, the number of stroke cases among Chinese will increase rapidly without more effective measures and it will be 31.77 million by 2030 which will lead to a severe situation of the control and prevention.

<table>
<thead>
<tr>
<th>Estimated Number of Cases</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myocardial infarction</td>
<td>8,101,001</td>
<td>16,081,550</td>
<td>22,630,244</td>
</tr>
<tr>
<td>Stroke</td>
<td>8,235,812</td>
<td>21,356,978</td>
<td>31,773,456</td>
</tr>
<tr>
<td>COPDs</td>
<td>25,658,483</td>
<td>42,527,240</td>
<td>55,174,104</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>1,412,492</td>
<td>4,621,900</td>
<td>7,391,326</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>36,156,177</td>
<td>52,118,810</td>
<td>64,288,828</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>79,563,965</strong></td>
<td><strong>136,706,478</strong></td>
<td><strong>181,257,958</strong></td>
</tr>
</tbody>
</table>

*Source: China Nutrition and Health Survey, 2002, China National NCD Risk Factor Surveillance, 2007*
2. Major problems of NCDs control and prevention
The main risk factors

Smoking, physical inactivity, high intake of salt and saturated fat and other unhealthy diets are main factors of the occurrence and development of chronic diseases

- Smoking rate among population aged 15 or above: 28.1%
- Male smoking rate: 52.9%
- Passive smoking rate among non-smokers: 72.4%

- Overweight in adults: 2002 - 22.8%, 2012 - 30.1%
- Obesity in adults: 2002 - 7.1%, 2012 - 11.9%
- Overweight in children and adolescents aged 6 to 17: 2002 - 4.5%, 2012 - 9.6%
- Obesity in children and adolescents aged 6 to 17: 2002 - 2.1%, 2012 - 6.4%

Cooking salt per day
- 2002: 12g
- 2012: 10.5g

Regular exercise in adults: 18.7%

The prevalence and mortality of NCDs and economic, social, demographic, behavioral, environmental and other factors are closely related:
- The number of elderly population is increasing
- The survival time of patients with chronic disease is prolonged
- Unhealthy lifestyles of individuals

• As health education has not been extensively carried on, the residents’ health care knowledge is poor and few of them adopt healthy behaviors, which make the risk factors of NCDs nearly out of control.
• Targeted interventions have not been widely implemented.
• The mechanism of government-led, multi-sectoral cooperation and participation of the whole society has not been established.
• The NCDs control and prevention technical network is still on the exploratory stage.
• Health manpower for NCD control are lacking.
3. Thoughts and suggestions of NCDs control and prevention policy and strategy adjustment
Respond to the challenges of NCDs: Joint efforts of government and society

33. Confirm that collective and multi-sectoral action have been taken by all member states and other relevant stakeholders at the local, national, regional and global levels...and enhance cooperation...We can control and prevent NCDs(e.g., reduce the prevalence, morbidity and mortality) in a large extent.

Source: The 66th United Nations General Assembly "Political Declaration on the Prevention and Control of Non-communicable Diseases high-level meeting" in September 2011
Respond to the challenges of NCDs: 
Joint efforts of government and society

36. Confirm that the effective NCDs control and prevention requires the government-led, multi-sectoral cooperation in health measures and, where appropriate, integrate the health work into all the policies and initiatives of all sectors including health, education, energy, agriculture, sports, transportation, communications, urban planning, environment, labor, employment, industry and business, financial and social and economic development and the others.

Source: The 66th United Nations General Assembly "Political Declaration on the Prevention and Control of Non-communicable Diseases high-level meeting" in September 2011
Respond to the challenges of NCDs: Joint efforts of government and society

• 37. **Confirm the contribution and important role of individuals, families, communities, intergovernmental organizations and religious institutions, civil society, academia, the media, voluntary associations and, where appropriate, including the private sector and industry and all other relevant stakeholders**

• 42. Confirm the need to develop **multi-sectoral approaches of health in the relevant government departments** . . .

Source: The 66th United Nations General Assembly "Political Declaration on the Prevention and Control of Non-communicable Diseases high-level meeting" in September 2011
A national meeting on health held from Aug. 19 to 20 in 2016

- Health policy: Focus on the grassroots, use reform and innovation to create momentum, prevention first, lay equal stress on traditional Chinese medicine and western medicine, inclusion of health in government policies, to ensure that all people enjoy the health benefits of policies.

- Called for full protection of people's health, stressing that public health should be given priority in the country's development strategy. Health is a prerequisite for people's all-round development and a precondition for economic and social development.
Suggestions on disease control and prevention (national)

• The government should provide full financial support for NCDs control and prevention knowledge popularity.
• Define the government priorities, goals and set up demonstration projects to guide the work.
• Establish a technical working system and clarify the responsibilities of relevant units.
• Determine the medical institutions' responsibilities in public health and develop the policies of guarantee financial support for the work.
Suggestions on disease control and prevention (national)

- Re-examine and develop the necessary knowledge, skills standards and duties in NCD control and prevention of clinical staff in different positions, and conduct a new performance evaluation.
- Develop staffing standards of the CDC and implement the full financial support policies.
- Develop policy of free access to essential drugs to control hypertension.
Suggestions on disease control and prevention (regional)

• Add NCD control to the local priority task
• Establish a local working network
• Provide financial support for NCD control
• Organize and carry out prevention and control project
• Conduct supervision and inspection to ensure the quality of work
• Collect information to provide support for local and national policies and strategies formulation
Suggestions on disease control and prevention (social)

- Media: Strengthen public advocacy and broadcast the important public service ads in prime time.
- Institutions: Carry out health education in the workplace. Implement measures to ban smoking in public places. Promote salt reduction, oil control and other measures in the canteens. Develop incentives.
- School: Solve configuration problems of health care personnel. Strengthen health knowledge training in teachers and health care workers. Develop healthy behaviors and habits from childhood.
- Community: For instance, carry out the family health meal preparation action in cooperation with the All-China Women's Federation.
4. Exploration in stroke control and prevention
Strategies of NCDs control and prevention

- Preventing and screening the risk factors should be prioritized, the work should be carried out at grassroots.
- Education First, Enhance Health Literacy.
- To standardize prevention and treatment, multidisciplinary cooperation should be strengthened.
- Screening and find out high-risk groups, targeted interventions should be given.
The network of Screening and Prevention working system had been established.

Keep going the project and the program.

Establish committees and set up the national project

Set up the national technical training program and promoting the appropriate technology

The network of Screening and Prevention working system had been established. Keep going the project and the program.
Initially formed the national network of the designated hospitals

- 306 designated hospitals
- 1000+ collaboration county hospitals
- 2700+ community or township medical institutions
Set up “stroke prevention / clinic screening” and “follow up of stroke patient" unit in designated hospitals, increase the service amount

2010
- Stroke prevention / clinic screening units: 44, 720,000 service person-times
- Follow up of stroke patients units: 39, 400,000 service person-times

2013
- Stroke prevention / clinic screening units: 156, 1,660,000 service person-times
- Follow up of stroke patients units: 150, 1,600,000 service person-times

2015
- Stroke prevention / clinic screening units: 191, 2,100,000 service person-times
- Follow up of stroke patients units: 185, 2,030,000 service person-times
Promote the establishment of the green channel for stroke emergency

- **2010,** 108 designated hospitals
- **2015,** 208 designated hospitals

- In 2010, 58,000 people benefited from the green channel
- In 2015, 215,000 people benefited from the green channel
Promote clinical application of appropriate diagnosis and treatment of stroke

- In 2010, 247 cases underwent CEA surgery
- In 2010, 4632 cases received intravenous thrombolysis
- In 2015, 2621 cases underwent CEA surgery
- In 2015, 17625 cases received intravenous thrombolysis
Promote healthy lifestyle and cultivate people's concept of healthy living

In 2015, a total of 5882 science propaganda lectures have been held in the designated hospitals of our country and more than 960,000 people benefited from it, and more than 690,000 people benefited from the 4144 free clinics.

In 2015, the stroke prevention committee have sent more than 500 experts to Tibet, InnerMongolia, Shanxi, Yunnan, Hainan and other places to carry out the free clinic, academic lectures, donation and other activities and nearly 10,000 people participated in these activities which have achieved good social repercussions.
Information platform and data collection of stroke prevention

Establish a stroke cases library: Collect all the information of patients in the hospital information system to establish a research, structured information database for the designated hospitals.

Promote the research and quality control of hospital: With the stroke cases library established by CSDI, the designated hospitals can carry out a series of scientific research and quality control of medical treatment.

Report the hospitalization data automatically: Deployed by CSDI, the designated hospitals can report the hospitalization data automatically and reduce the work intensity dramatically and improve work efficiency.

Currently, Xuanwu Hospital of Capital Medical University, Tianjin Huanhu Hospital, Anhui Provincial Hospital, The First People's Hospital of Jining, Weihai Hospital, Liaocheng People's Hospital, Hengshui People's Hospital, First Affiliated Hospital of Zhengzhou University and other units have completed data docking and upload; Another 110 designated hospitals have been working on deployment of database docking.
Survey of high-risk groups of stroke on four screening samples in 2011-2014

• Permanent residents aged 40 and above
• The information of 2.65 million screening objects were analyzed including 60,161 stroke cases.
• In 2011, 6 provinces and cities (Beijing, Henan, Shandong, Shanxi, Shaanxi, Sichuan)
  – 429,826 screening objects
  – 8,738 stroke cases
• In 2012, 16 provinces and cities (Beijing, Tianjin, Hebei, Shanxi, Liaoning, Heilongjiang, Jiangsu, Zhejiang, Shandong, Henan, Hubei, Guangdong, Sichuan, Shaanxi, Gansu, Xinjiang)
  – 857,416 screening objects
  – 18,603 stroke cases
• In 2013, 31 provinces and the Xinjiang Production and Construction Corps
  – 633,859 screening objects
  – 15,027 stroke cases
• In 2014, 31 provinces and the Xinjiang Production and Construction Corps
  – 726,451 screening objects
  – 17,793 stroke cases

Source: Chinese stroke data center
## Standardized prevalence of stroke (2011—2014)

<table>
<thead>
<tr>
<th>Screening sample</th>
<th>male</th>
<th>female</th>
<th>urban</th>
<th>rural</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011, 6 provinces</td>
<td>2.12%</td>
<td>1.66%</td>
<td>1.46%</td>
<td>2.22%</td>
<td>1.89%</td>
</tr>
<tr>
<td>2012, 16 provinces</td>
<td>1.98%</td>
<td>1.52%</td>
<td>1.65%</td>
<td>1.85%</td>
<td>1.75%</td>
</tr>
<tr>
<td>2013, 31 provinces</td>
<td>2.28%</td>
<td>1.81%</td>
<td>1.83%</td>
<td>2.25%</td>
<td>2.05%</td>
</tr>
<tr>
<td>2014, 31 provinces</td>
<td>2.29%</td>
<td>1.93%</td>
<td>2.03%</td>
<td>2.18%</td>
<td>2.11%</td>
</tr>
</tbody>
</table>

*According to the sixth census data, the above data have been standardized by city, gender and age group.

According to the prevalence in 2014, there were 11.82 million residents suffered from stroke in the population aged 40 years and older!

**Source:** Chinese stroke data center
The crude prevalence of stroke in people with different educational level (2011—2014)

<table>
<thead>
<tr>
<th>Screening sample</th>
<th>Primary school or illiteracy</th>
<th>Middle school</th>
<th>Junior college and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011, 6 provinces</td>
<td>2.62%</td>
<td>1.58%</td>
<td>1.41%</td>
</tr>
<tr>
<td>2012, 16 provinces</td>
<td>2.57%</td>
<td>1.77%</td>
<td>1.62%</td>
</tr>
<tr>
<td>2013, 31 provinces</td>
<td>3.07%</td>
<td>2.02%</td>
<td>1.69%</td>
</tr>
<tr>
<td>2014, 31 provinces</td>
<td>3.04%</td>
<td>2.17%</td>
<td>1.91%</td>
</tr>
</tbody>
</table>

Source: Chinese stroke data center
Distribution of the high-risk population in different stroke risk degree

Source: Chinese stroke data center
The proportion of the age distribution in stroke patients (aged 40-64 VS aged 65 and older)

2011, 6 provinces:
- Aged 40-64: 45.63%
- Aged 65 and older: 54.37%

2012, 16 provinces:
- Aged 40-64: 42.41%
- Aged 65 and older: 57.59%

2013, 31 provinces:
- Aged 40-64: 46.37%
- Aged 65 and older: 53.63%

2014, 31 provinces:
- Aged 40-64: 49.03%
- Aged 65 and older: 50.97%

Source: Chinese stroke data center
The proportion of the age distribution in population aged 40 and above at high risk of stroke

2011, 6 provinces

- Aged 40-64: 62.06%
- Aged 65 and older: 37.94%

2012, 16 provinces

- Aged 40-64: 58.34%
- Aged 65 and older: 41.66%

2013, 31 provinces

- Aged 40-64: 60.83%
- Aged 65 and older: 39.17%

2014, 31 provinces

- Aged 40-64: 62.01%
- Aged 65 and older: 37.99%

Source: Chinese stroke data center
Suggestion from Academician of Chinese Academy of Engineering:

The screening and intervention on the risk of stroke in middle-aged population should be an urgent and important task to the whole society.
The requirements of NCD prevention and health promotion in the new era have highlighted the importance of "prevention". We are hoping that we can learn from the experience in the construction of stroke control and prevention system for the other priority diseases such as COPD, osteoporosis, mental disorders, cancer and other diseases!
Thank you!