

Strengthening infectious disease report & surveillance system in China

Office for Disease Control and Emergency Response, China CDC

11/06/2007



Background

- n Infectious diseases are still great threat to public health
 - .. 37 notifiable disease, 4.6 million cases, death 10,726
 - .. Blood-borne / sexually transmitted infectious disease increases continuously
 - .. Frequent outbreaks of some respiratory and intestinal infectious diseases in many places
- n SARS crisis, 2003
 - .. Lack of sensitivity
 - .. Lack of completeness

Legal and Policy Basis

n Law of the People's Republic of China on Prevention and Treatment of Infectious Diseases

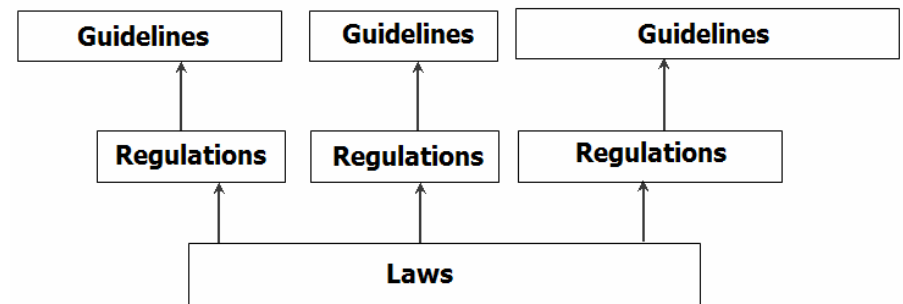
- .. Adopted on 1989, revised on 2004
- .. Basic law of infectious disease control and prevention in China

n Related laws and regulations

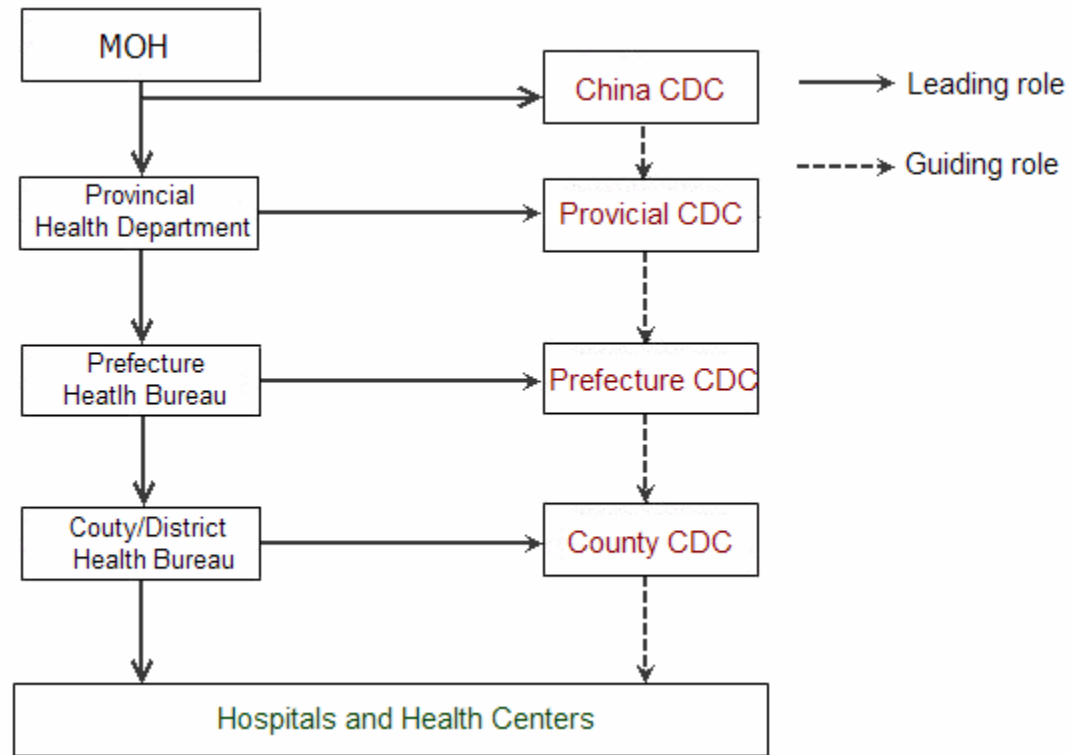
- .. Emergency Response Law of the People's Republic of China
- .. Regulation on the Urgent Handling of Public Health Emergencies
- .. Frontier Health and Quarantine Law of the People's Republic of China
- .. Law of the People's Republic of China on Animal Epidemic Prevention
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n Technical guidelines and measures for management

- .. Measures for the Administration of Information Reporting on Monitoring Public Health Emergencies and Epidemic Situation of Infectious Diseases
- .. Developed by MOH
- .. Developed by CCDC
-



Organizational Structure





Diseases under Surveillance

n Notifiable infectious diseases

- .. 37 diseases
- .. Class A, 2
- .. Class B, 25
- .. Class C, 10

n National priority diseases

- .. HIV/AIDS
- .. Tuberculosis
- .. Schistosomiasis
- .. Viral hepatitis B

n Selected diseases and vectors

- .. 20 diseases
- .. Including non-compulsory reported diseases and symptoms

n EPI-targeted diseases

- .. 5 vaccines (BCG, OPV, MV, DPT, HepB)
- .. 7 infectious diseases
-



Major Systems

n Notifiable infectious disease report system

- .. Passive surveillance conducted by the Center for Public Health Surveillance and Information Service, China CDC

n National priority infectious diseases surveillance systems

- .. AIDS, sentinel surveillance conducted by the National Center for AIDS/STD Control and Prevention
- .. TB, conducted by the National Center for TB Control and Prevention

n Selected infectious diseases and vectors surveillance systems

- .. Comprehensive surveillance conducted by the Office of Diseases Control and Emergency Response, China CDC

n EPI-targeted diseases and AEFI surveillance systems

- .. Adverse events following immunization (AEFI)
- .. Active surveillance conducted by National Immunization Program, China CDC



Related Report and Surveillance Systems

- n Lab-based surveillance

- .. Pulse-net
- .. Food-net
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- n Public health emergency reporting system

- .. Event-based report

- n Information system of public health disaster

- n

Internet-based Information Platform

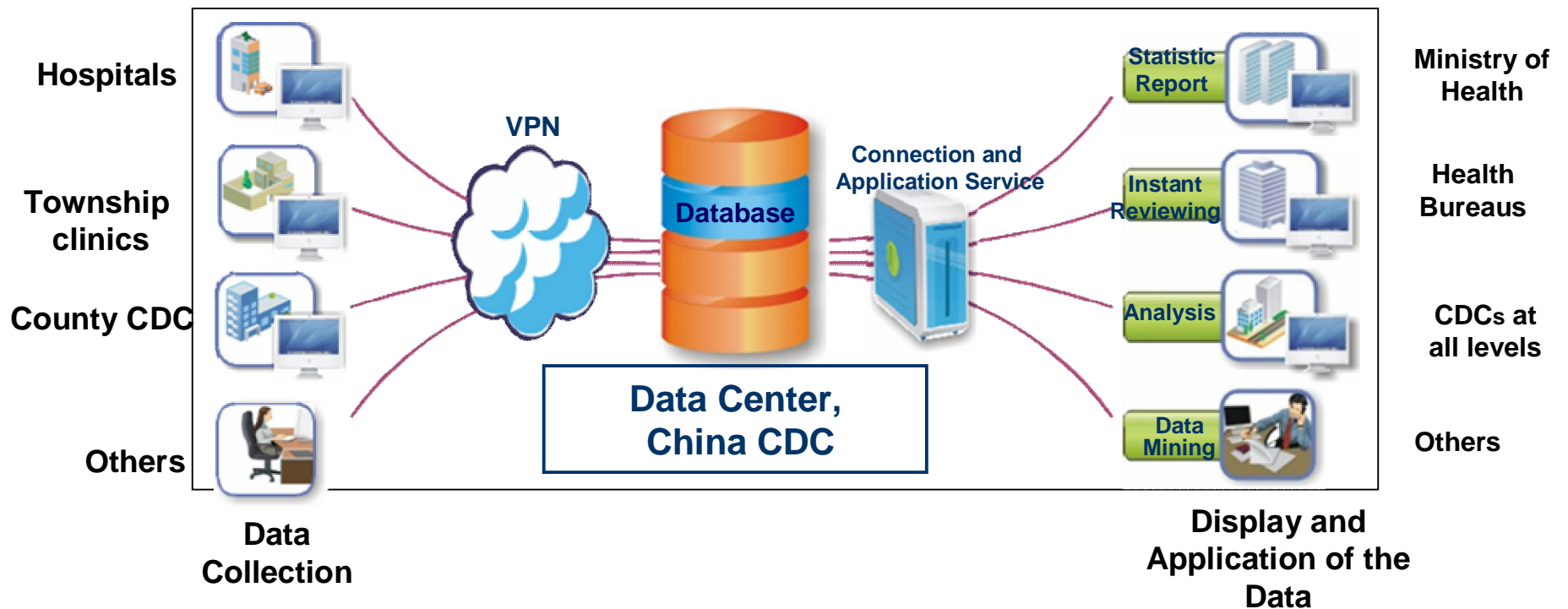
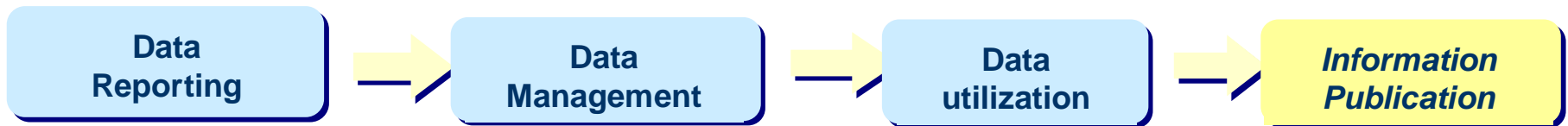
中国疾病预防控制中心信息系统
CHINA INFORMATION SYSTEM FOR DISEASES CONTROL AND PREVENTION

选项：
疾病监测信息报告管理系统
疾病监测信息报告管理系统
突发公共卫生事件报告管理信息系统
健康危害因素监测信息系统
疾病预防控制中心基本信息系统
鼠疫防治管理信息系统
结核病管理信息系统
艾滋病网络直报信息系统
平台配置工具
重点传染病监测自动预警信息系统
专病/单病监测信息报告管理系统
中国流感/禽流感监测信息系统

地区编码： 用户编码： 密码：

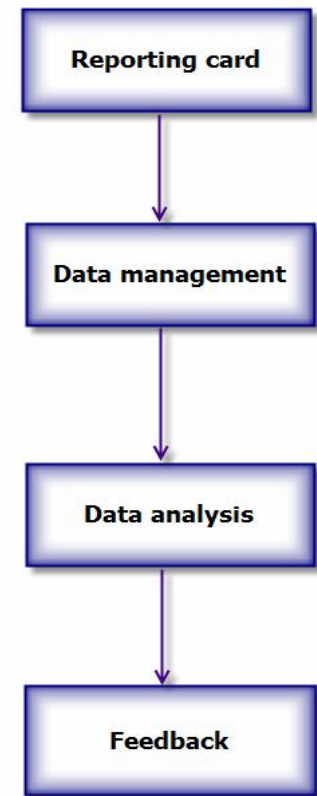
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Working Principle of the internet-based Reporting System



Main Functions

- n Hospitals report infectious disease cases through internet
- n All CDC and health bureau can log on the system, and check, browse, enquire, analyze, and manage at real time
- n For those community or village without access to internet, reporting card will be submitted to county CDC, and be put into the system there





Sub-systems

- n Notifiable disease reporting system
- n Public health emergency reporting system
- n Disease-specific surveillance system
 - AIDS
 - TB
 - Plague
 - Influenza/AI
 -
- n Others

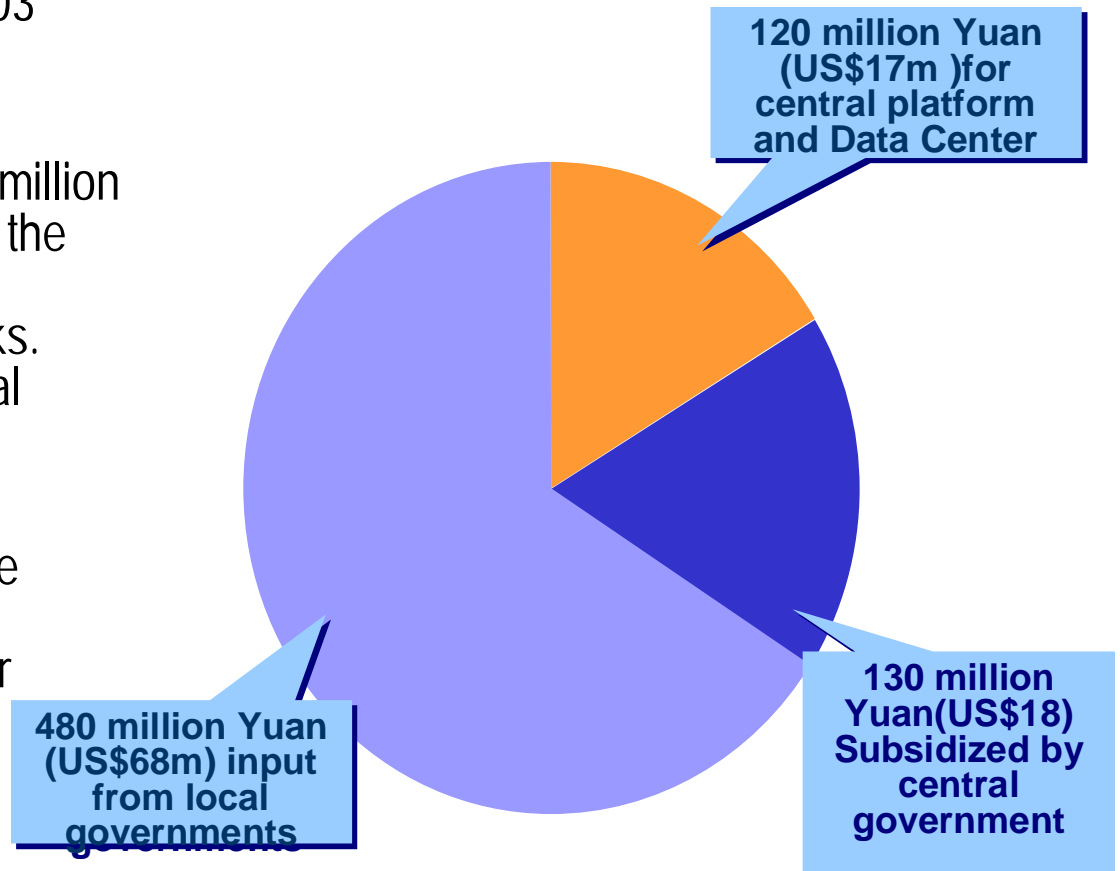


System Coverage

- n All the CDC at all levels are covered
 - 95% hospitals at county and above level
 - 66.1% township health station
- n About 4500 medical units have the ability to use the system
- n About 5000 users everyday
- n Approximately 12000 cases reported everyday
- n Proportion of the internet-based reporting for county and above hospitals is 94.9% in 2006

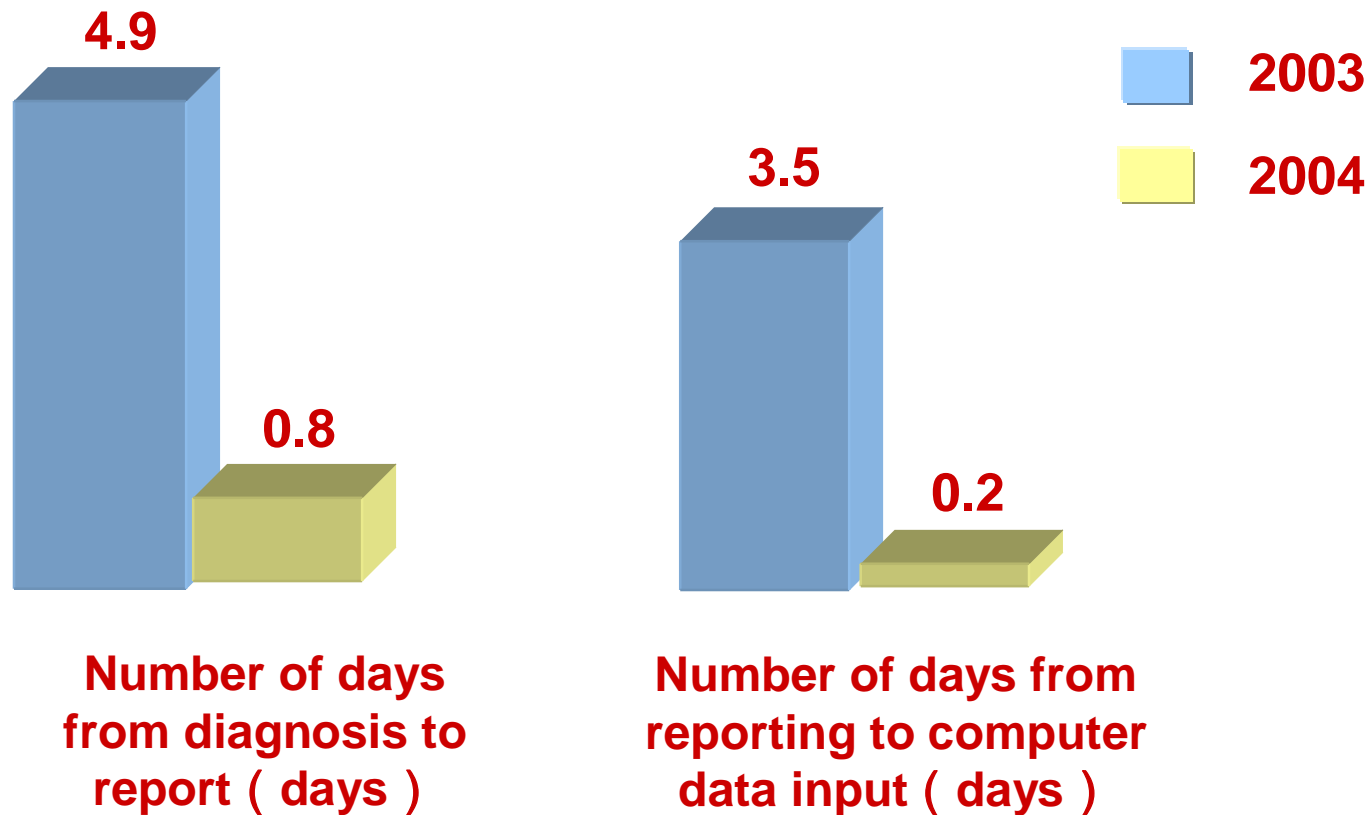
Costs for the System Exploitation and Application

- n The system exploitation funds were offered both by the central and the local governments, totaling to 730 million RMB Yuan (about US\$103 million).
- n Within the central funding, \$17 million was for the central platform and the Data Center, \$18 million for the construction of the local networks. \$68 million was input by the local governments.
- n Central government provided the middle and west China's under-developed regions with funds for buying hardware and training.



Effect of the Internet-based Reporting System

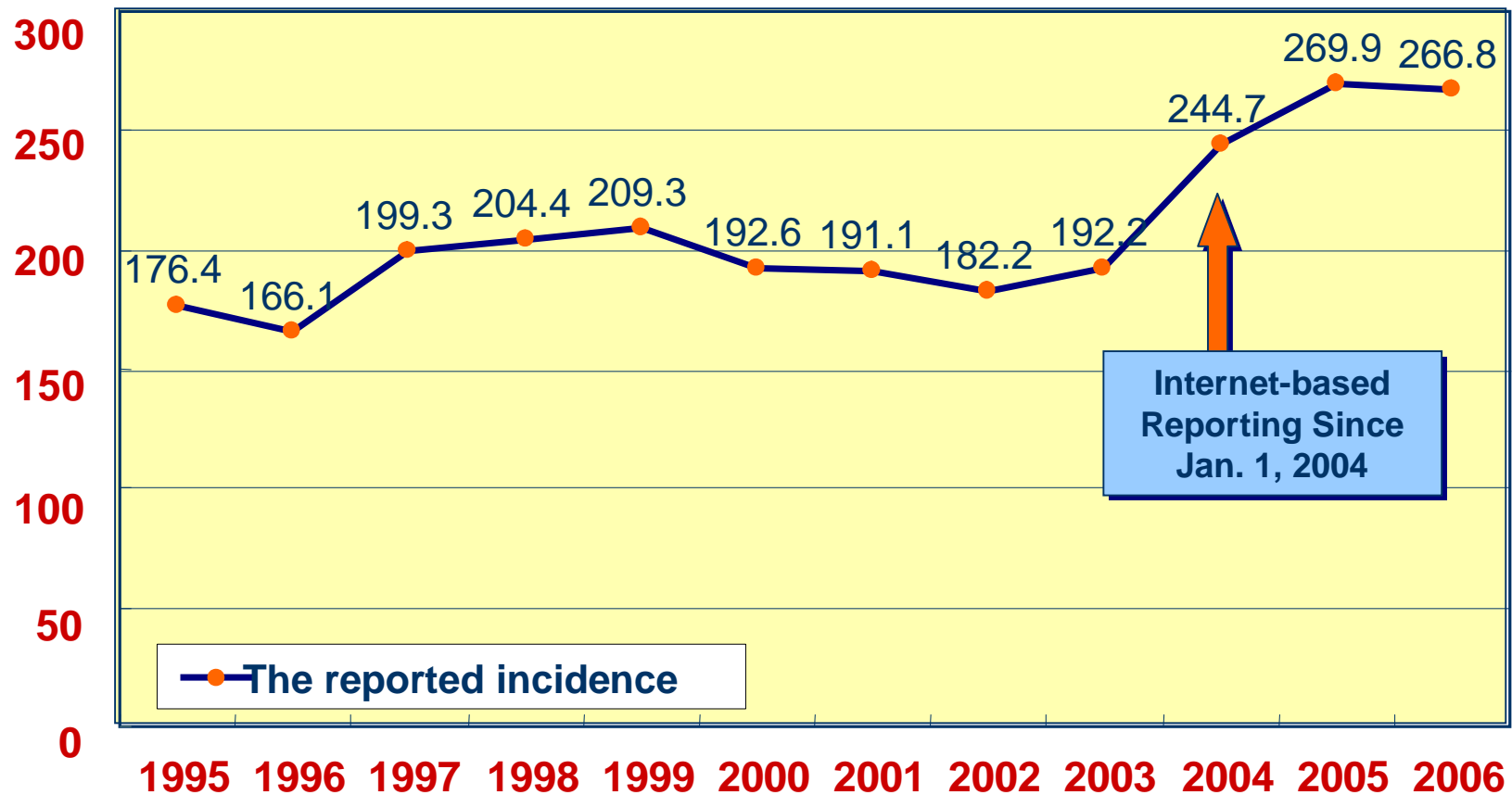
n Improving the timeliness of infectious disease reporting



Effect of the Internet-based Reporting System

n Improving the completeness and underreport cases decreased

Incidence(1/100,000)





Effect of the Internet-based Reporting System

- n Improving the ability of early outbreak detection and response
 - .. Data analysis
 - .. GIS-map: outbreak detection via observing report cases clusters made by GIS
- n Improving the ability of emerging infectious disease finding and response
 - .. HPAI
 -



Monitoring and Evaluation

n Monitoring indicators

- .. NIDRS
 - n Timeliness
 - n Completeness
 - n Duplicated card number
- .. Disease-specific
 - n Timeliness
 - n Completeness
 - n Accuracy
 - n Sensitivity
 - n

n Evaluation

- .. Periodical evaluation
 - n Annual
 - n Conducted by health administration department or upper-level CDC
- .. Special research
 - n Conducted by health administration department or upper-level CDC or research institute



In the Future.....

- n Establishing new sub-systems, such as lab information system
- n Improving existing system
- n Improving data utilization
- n Integrating
- n Improving international communication and cooperation

Thank You

