Disease Surveillance Practice on Zoonosis with Focus on Vectors and Reservoirs in China

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If we neglect this threat, we will pay a heavy price for it. Zoonoses
Outline

- Zoonoses: Communicable Diseases
- Legislation
- Surveillance Systems
- Examples
- Other Information
Legislation

- Regulation on the Control of Communicable Diseases, 1956?
- Regulation on the Control of Acute Communicable Disease, 1959
- Law for Control and Prevention of Communicable Diseases, 1989
- Amended Law for Control and Prevention of Communicable Diseases
  - Approved by National People’s Congress in Aug. 28 2004,
  - Implementing in Dec.1, 2004
  - Diseases for notification (3 groups- 37 diseases)
  - Punishment for delinquent reporting
National Statutory Notifiable Communicable Diseases

- **Group A**: Plague, Cholera

- **Group B**: SARS, AIDS, Viral hepatitis, Poliomyelitis, HPAI, Measles, HFRS, Rabies, Japanese encephalitis, Dengue fever, Anthrax, Bacillary & amebic dysentery, TB, Typhoid fever/Paratyphoid fever, Meningococcal Meningitis, Pertussis, Diphtheria, Neonatal Tetanus, Scarlet fever, Brucellosis, Gonorrhea, Syphilis, Leptospirosis, Schistosomiasis, Malaria

- **Group C**: Influenza, Mumps, Rubella, Acute hemorrhagic Conjunctivitis, Leprosy, *Epidemic typhus/Endemic typhus, kala-azar*, *Echinococcosis*, Filariasis, Infectious diarrhea
Public Health Service Agencies in China

- Ministry of Health
  - Provincial health departments
    - Prefectural health bureaus
      - County health bureaus
        - Township hospitals
          - Village clinics
  - China CDC
    - Provincial Disease Control Agencies
      - Prefectural/City Disease Control Agencies
        - County Disease Control Agencies
Infrastructures for Communi. Dis. Surveillance

- Central: CCDC
  - Center for Public Health Surveillance & Infor. Ser.
  - NIP, TB Center, HIV/AIDS Center
  - Institute for Food Safety and Public Nutrition
- Provincial CDCs/TB Centers
- Prefecture/Municipal CDCs/TB Centers
- County/District CDCs/TB Centers
- Hospitals, Clinics, Community Health Centers, Blood Banks, Quarantine Agencies
Communicable Disease Surveillance Systems

- Old System

- National Notifiable Communicable Diseases Report System
  - Aggregative data reporting monthly level by level
  - too late for Identifying of outbreak
  - too roughly Information for CDCs above County level

- Diseases Surveillance Points (DSPs) System
  - Since 1978
  - 145 points selected randomly nationwide
  - Coverage 10 million of Population
  - Birth and death registry and reporting, vital statistics
  - Class A, B and C statutory notifiable infectious dis. Reporting
  - Class C reporting only in the DSPs
  - Conducting health surveys

- Specific Diseases Surveillance System: TB, HIV/AIDS, STD, plague, VPD,
<table>
<thead>
<tr>
<th><strong>Communicable Disease Surveillance Systems</strong> - New Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statutory Notifiable Diseases Reporting System</strong> (3 group, 37 diseases)</td>
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<tr>
<td><strong>Enhanced Communicable Disease Surveillance</strong></td>
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<tr>
<td>• Plaque, Cholera, Rabies, HRFS, Dengue, TB, AIDS/HIV, VPD, Brucellosis, etc.</td>
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<td>• Case Investigation and/or Lab. Diagnosis</td>
</tr>
<tr>
<td><strong>Sentinel Surveillance</strong></td>
</tr>
<tr>
<td>- Influenza/ILI, STIs/HIV in Population at High Risk</td>
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<td><strong>SARS and Avian Flu. Early Alert Surveillance</strong></td>
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<td>- Cause-unknown pneumonia surveillance based on all levels hospitals.</td>
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<td>- Infect. dis. related death reporting based on county and above levels hospitals</td>
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<td><strong>Laboratory or environmental surveillance</strong></td>
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<td>- Pulse-net, Food-net</td>
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<tr>
<td><strong>Disaster related health condition and public health emergency reporting System</strong></td>
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<tr>
<td>- Disaster related public health and sanitary condition</td>
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<tr>
<td>- Dis outbreak, chemical leaking, environmental pollution, food poisoning, etc.</td>
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Reporting System of Statutory Notifiable Communicable Diseases (3 groups-37 dis.)

- Launched since January 2004
- Internet-based real-time (quasi real-time) case reporting system
  - Timing of reporting (new guideline will be issued next month)
    - Group A and SARS, HPAI, Polio, pulmonary anthrax: within 2 hours
    - Group B and C: within 24 hours
  - Method of reporting
    - Online reporting if Internet available
    - For Clinic and hospital which internet unavailable: Fax, mailing cards or telephone reporting to County CDC and input through Internet by County CDC
Reporting System of Statutory Notifiable Communicable Diseases

- Enabling early Detection of outbreak/epidemic
- Detailed case data at each level CDC and HD.
- Real-time online or offline analysis/Statistics and table/graph making
- Feedback and dissemination of surveillance information
  - *(DRNCDA) Daily Report of Notifiable Communicable Disease and Adverse Health Events: to MoH and CCDC subcenter*
  - *(WRNCDA) Weekly Report of Notifiable Communicable Disease and Adverse Health Events: to MoH, CCDC subcenter, Provincial HD and CDC*
  - *(MRNCDA) Monthly Report of Notifiable Communicable Disease and Adverse Health Events: to MoH, CCDC Subcenter, HD and CDC at Each level*
  - *(ARNCDA) Annually Report of Notifiable Communicable Disease and Adverse Health Events: to MoH, CCDC Subcenter, HD and CDC at Each level*
Topology of Reporting System of Statutory Notifiable Communicable Diseases
Main feature

- If need, add notifiable diseases at any time
- Browse Cases variable at all level CDC
- Web-GIS
- Auto alert
Main function

- CASE query
- Real time online or offline analysis/Statistics and table/graph making
  - Analysis on daily, weekly, monthly and yearly basis
- Dictionary management
Web-GIS Platform
- Display Case Incidence from National to Township Level
全国传染病与突发公共卫生事件 监测周报  
（第 39 周）

中国疾病预防控制中心 2004 年 9 月 27 日 - 10 月 3 日

目录
一、疫情概况
    （一）概述 ................................................................. 1
    （二）地区分布 .............................................................. 2
    （三）疫情趋势 .............................................................. 4
二、重点疫情分析
    （一）霍乱 ................................................................. 4
    （二）流行性乙型脑炎 ....................................................... 4
    （三）细菌性疾病 ............................................................ 5
    （四）伤寒及副伤寒 ......................................................... 6
    （五）禽流感 ............................................................... 7
    （六）甲型肝炎 .............................................................. 7
    （七）钩端螺旋体病 ......................................................... 7
    （八）其它感染性腹泻 ...................................................... 8
三、突发公共卫生事件 ..................................................... 9
四、国际疫情动态 .......................................................... 9
    1、乍得暴发霍乱 ......................................................... 9
    2、泰国禽流感近况 ....................................................... 9
五、重点提示 .............................................................. 9

Weekly Report of Notifiable Communicable Disease and Adverse Health Events
Disseminated to MOH, CCDC institutes and subcenters/, Provincial HD&CDC

・Summary
・Disease outbreak/epidemic
・Other aberration detected
・Adverse Health Events
  • International outbreak news
  • important implication
图2 2004年第46周全国甲、乙类传染病报告发病数与前五周中位数比较（%）
Enhanced Disease Surveillance

- Plague, Cholera, Rabies, HRFS, Dengue, etc.
- EPI-target diseases
- Character and feature
  - Based on statutory reporting of cases
  - Case investigation and sample collection
  - Lab diagnosis
  - Active surveillance for some diseases
  - Environmental and risk factor surveillance for some diseases
Disease with Related Animal Surveillance

- Plague:
- Rabies
- HRFS
- Dengue
- Malaria
- Japanese encephalitis
- Anthrax
- Leptospirosis
- kala-azar
- Echinococcosis
- Filariasis
- Schistosomiasis
- SARS
- HPAI
- Brucellosis
- TB
- Epidemic typhus/Endemic typhus
Plague Surveillance and Alert System

- Animal & Human Surveillance
  - Control activities/process management and monitoring
  - Real time analysis/Statistics and table/graph making
  - Analysis on daily, weekly, monthly and yearly basis
  - Real-time Alert
By Nov 25, 2004, 22 plaque cases were reported from Qinghai (20), Gansu (1) and Neimenggu (1).
Hemorrhagic Fever with Renal Syndrome (HFRS)

- Jan, 1 – Nov, 14, 21539 cases, and 183 deaths.
- Number of cases in 5 Provinces take 70% of total cases (LN, SD, HeB, HLJ, JL)
- Animals: Rodents
A New Comprehensive Vector Surveillance System in China

- Launched in 2005
- New protocols
- Program management
- The targeted vectors: mosquitoes, flies, cockroaches, rodents
- The pilot provinces: 17 provinces
- The scenarios: 40 cities
The Distribution of Surveillance System
Challenge

- Weak designing and evaluation of surveillance system
- Analysis, interpretation of surveillance data need being improved
- Lack of methodology and technique to use information to facilitate decision-making
- Low capability to detecting and identifying emerging infection
- Laboratory surveillance very weak
International Forum For Sustainable Management Of Disease Vectors

21st-23rd April, 2006, Beijing
Central Garden Hotel 中苑宾馆
主办：中华预防医学会
Organizer: Chinese Preventive Medicine Association
承办：中华预防医学会媒介生物及控制分会
Sponsor: Society for Vector Biology & Control, CPMA
协办：中华预防医学会医学寄生虫学分会
Co-sponsor: Society for Medical Parasitology, CPMA
中华预防医学会铁路分会
Society for Railway Health, CPMA
组织机构 Organization

- 国际顾问委员会：Duane J. Gubler，Brian Herbert Kay等
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- 王陇德 WANG Longde
- 主席：汪诚信 WANG Chengxin
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- 秘书长：刘起勇 LIU Qiyong（兼）
会议主题及议题

会议主题：媒介生物可持续控制

●主要议题：
  - 1. 新发和再度爆发的媒介生物性疾病
  - 2. 媒介生物监测及控制方法和策略
  - 3. 媒介生物抗药性的治理
  - 4. 媒介生物入侵的防御和管理
  - 5. 媒介生物及媒介生物性疾病的危险评估
  - 6. 大型活动媒介生物控制保障

●会议期间同时进行国际媒介生物控制技术及产品展示
The Theme: Sustainable Management of Disease Vectors

Topic Themes:
- Emerging and re-emerging vector-borne diseases.
- Updates for techniques and strategies on vector surveillance and control.
- Management of resistance of disease vectors to pesticides.
- Strategy and technique for managing disease vector invasions.
- Risk assessment on vector and vector borne diseases for civil engineering
- Pest management for wellbeing of big events

Exhibitions of Techniques and Products for Vector Management
During the Forum
论坛网址website:

www.Chinavbc.cn/forum
中国・北京

2006年4月21－23日

主办单位：
中华预防医学会

承办单位：
中华预防医学会媒介生物控制分会

协办单位：
中华预防医学会医学寄生虫学分会
中华预防医学会铁路分会

协办媒体：
中国媒介生物学及控制杂志

中国媒介生物控制网
中苑宾馆

中苑宾馆地理位置优越，依傍著名的古刹五塔寺、大钟寺，以及体现首都现代文明的动物园、紫竹院公园、首都体育馆、北京展览馆、中央民族学院、北京交通大学。西侧的白颐路直达颐和园、圆明园、香山，门前的高粱桥斜街直通西直门桥、联想桥，径入二、三环、四环线。
中苑宾馆环境

外部环境

内部环境
中苑宾馆大堂
中苑宾馆大堂采用透明屋顶的设计，阳光充足，大堂多采用朱红、明黄的、黑色、金色的装修主色调，由显最高贵典雅、金碧辉煌。

在中苑大堂中各个服务设施分布其中，总台、会议报道台、大堂吧、商务中心、商场、邮局、航空公司、保险室等，随时为您提供方便、快捷的服务。

设在大堂西侧的总台率先采用坐式服务，使客人更加轻松的办理各项手续，体现了以人为本的管理方式。

meijie, 10/26/2005
会议住宿

豪华单人间

标准双人间
Thank you for your attention