Communicable Diseases in the Western Pacific Region

Inaugural Ceremony of the Scientific Advisory Structure of the Centre for Health Protection, Department of Health, Hong Kong

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Western Pacific Regional Office
WHO
Current situation of communicable diseases in the Western Pacific Region
- HIV / AIDS
- TB
- Vaccine Preventable Diseases
- Vector borne diseases

New communicable diseases challenges in the Western Pacific Region
- SARS
- Avian Influenza
- Other emerging diseases

Roles of Hong Kong SAR in regional and global efforts
Western Pacific Region of WHO
Estimates of yearly AIDS deaths in 2000 & 2005 in 4 selected Western Pacific countries

- **China**: 120,000 deaths
- **Cambodia**: 24,000 deaths
- **Viet Nam**: 80,000 deaths
- **Malaysia**: 11,000 deaths

2000:
- **35,000 deaths**

2005:
- **120,000 deaths**
What is the “3 by 5” Initiative?

WHO/UNAIDS global treatment initiative for AIDS
“Addressing a global public health emergency”

An initiative to make ARV treatment available to 3 million people by 2005

400,000 people receive treatment today

Measurable, fixed target towards the goal of universal access to ART

A voluntary process
- driven by country
- supported by regional offices
- with stewardship of HQ
Distribution of notified TB cases in Western Pacific Region (2002)

- China: 57%
- Philippines: 15%
- Viet Nam: 12%
- Republic of Korea: 4%
- Japan: 4%
- Cambodia: 3%
- Others: 5%
Case Detection Rate (CDR) and DOTS coverage in 7 High Burden Countries in WPR

The bar chart shows the Case Detection Rate (CDR) and DOTS coverage for seven high burden countries in the Western Pacific Region (WPR). The countries are PNG, CHN, LAO, CAM, PHL, MON, and VTN. The chart indicates that the CDR and DOTS coverage for these countries are below 70% for PNG and CHN, whereas other countries have higher coverage rates. The red line represents the 70% CDR threshold.
Measles cases and coverage
WPR 1974-2002

Cases (in thousands)

Coverage

Year


0% 20% 40% 60% 80% 100%
Countries that have interrupted measles transmission

Countries where measles transmission was reestablished

Measles-endemic countries

*According to 2003 data
Introduction of Hep B vaccine

% of Countries

Year of Introduction
Number of reported dengue cases
2003

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>(11,635)</td>
</tr>
<tr>
<td>China</td>
<td>(74,125)</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>(24,789)</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>(13,060)</td>
</tr>
<tr>
<td>Laos PDR</td>
<td>(16,978)</td>
</tr>
<tr>
<td>Macau</td>
<td>(2,341)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>(6,260)</td>
</tr>
<tr>
<td>Philippnes</td>
<td>(15,816)</td>
</tr>
<tr>
<td>Singapore</td>
<td>(6,260)</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>(9,300)</td>
</tr>
<tr>
<td>Brunei</td>
<td>(74,125)</td>
</tr>
</tbody>
</table>

Dengue cases 2003

- 1 - 1000
- 1001 - 5000
- 5001 - 10000
- 10001 - 20000
SARS cases by region
1 November 2002 – 7 August 2003

Western Pacific: 95.9%

Americas: 3.4%

SE Asia: 0.16%

Europe: 0.4%

Others: 0.1%

Global Total: 8096 cases, 774 deaths

WPR Total: 7768 cases (95.9%), 727 deaths (93.9%)
WHO consultants for affected countries

- China
  - Feb: 77
  - Mar: 22
  - Apr: 17
  - May: 28
  - Jun: 11
  - Jul: 9
  - Aug: 77
  - Total: 164

- Hong Kong (China)
  - Total: 22

- Taiwan (China)
  - Total: 17

- Viet Nam
  - Total: 28

- Philippines
  - Total: 11

- Singapore
  - Total: 9

Others: 164

- Epidemiology
- Infection Control
- Laboratory
- Comm
- Logistics
- Environ
- Others
SARS cases by week of onset

First cases in Guangdong

Outbreak in Guangdong

M Hotel in HK

Amoy Garden

Global Alert

Multi-country Outbreaks

All areas removed from the list
Lessons learned from SARS

- Timely and transparent information sharing
- National sovereignty and protection of global public health
- Economic impact
- Lack of surge capacity at country and regional level
- Poor public health infrastructure
- Inadequate infection control practices in health care settings
- Multi-sectoral coordination
- Risk communication
Key elements for success in global containment of SARS

- High level of leadership and commitment
- The dedication and hard work of public health staff
- Unprecedented worldwide collaboration among governments and the scientific community

*However, there are still issues that need to be addressed...*
One year after SARS outbreak

Remaining issues
- Ecology of SARS CoV in environment (natural reservoir)
- Vaccine and antiviral development
- Diagnostic kits

New issues
- Laboratory safety and containment
  - Laboratory acquired cases in Singapore, Taiwan, Beijing
Avian influenza (H5N1) in Asia as of 10 March 2004
## Confirmed human cases of avian influenza A(H5N1) as of 17 March 2004

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>34</strong></td>
<td><strong>23</strong></td>
</tr>
</tbody>
</table>
Laboratory confirmed human cases of influenza A/H5N1 infection in Thailand and Viet Nam by province (N=33)
(as of 9 March 2004)

Thailand  n = 11
Viet Nam  n = 22

Province reporting
≥ 1 case

Country boundary
Province boundary

Data Source: WHO
Map Production: Public Health Mapping Team
Communicable Diseases (CDS)
© World Health Organization, March 2004
Status of H5N1 cases by age group
Thailand and Viet Nam (N= 34)
Human Public Health Risk

- Human cases in affected areas
  - Still small number of confirmed cases
  - Not enough information to assess public health impact

- Emergence of a new influenza virus
  - Efficient human to human transmission
  - Vast majority of people no immunity to H5
  - Pandemic with huge morbidity and mortality impact
Lessons learned from avian influenza outbreak in Asia

- Need to strengthen surveillance capacities
  - Human
  - Animal

- Better coordination between human public health and agriculture sectors
  - National Level
  - Regional / Global Levels

- Human public health vs impact on economy
  - Reluctance to report poultry outbreak
Other emerging disease threats

- Nipah / Hendra
- Enterovirus 71
- West Nile Virus
- Hantavirus
- Other zoonoses
- Antimicrobial resistance
- Newly emerging diseases
Emerging communicable diseases
Why now?

- **Globalization**
  - Mass movement of people and goods

- **Rapid development**
  - Urbanization (ex. TB)
  - Deforestation (ex. Ebola)

- **Over-consumption of animal products**
  - Animal husbandry practices – intensive farming
  - Wild animal markets

- **Failure of health systems**
  - Heavy focus on curative care
  - Neglect of public health
  - Excessive antibiotic use
Global and Regional Alert and Response Networks

**Rational**

- None of countries and areas has all necessary expertise / capacity to respond to public health emergencies like SARS
- Gaps between developed and developing countries: e.g. laboratory, epidemiology etc.
- Rapid and transparent information exchange is critical to prevent international spread of disease
Epidemic Alert and Response

Protect the world ...

International Health Regulations = Global legal framework to protect the world from public health threats

اللوائح الصحية الدولية

国际卫生条例

International Health Regulations

Règlement sanitaire international

Международные медико-санитарные правила

Reglamento Sanitario Internacional

World Health Organization
Why have IHR?

- Serious and unusual disease events are inevitable
- Globalisation - problem in one location is everybody’s problem
- An agreed code of conduct

PROTECTS against:

1. the spread of serious risks to public health
2. the unnecessary or excessive use of restrictions in traffic or trade for public health purposes
IHR are not new

- Notification: to WHO, of a case of cholera, plague or yellow fever, notify WHO when the area is free from infection - narrow focus

- Health Organization: ports, airports and frontier posts are adequately equipped to apply the IHR measures - again focused on 3 diseases and outdated

- Health Measures: The maximum measures applicable to international traffic, which a state may require for the protection of its territory against cholera, plague and yellow fever - rigid and punitive

In revising we needed to overcome these limitations
The Proposed Revision

- **Notification:** Public health emergency of international concern
- **Use information coming from sources other than official member state notifications**
- **Temporary recommendations**
  - IHR emergency committee
  - Based on risk assessment
- **National focal point**
- **Minimum core capacity**
  - Capacity building
Major milestones in the revision

2004

• report to EB 113 - green light
• Regional Consultation Meetings (WPRO: April 28-30)
• Amended draft revision proposals
• Intergovernmental Working Group (Nov 2004)
• Final regulatory draft

2005

_report to EB 115
_W H A_
Roles of Hong Kong in global & regional effort

- Participation in global and regional networks
  - Surveillance
  - Laboratory
  - On-site support

- Capacity building in neighbouring countries
  - Training
Roles of Hong Kong in global & regional effort

- **Surveillance**
  - Rapid dissemination of information on CD from Hong Kong
  - Initiate discussions and information sharing with the region
Roles of Hong Kong in global & regional effort

- **Laboratory networks**

  - Laboratories in Hong Kong play critical roles as regional and global reference laboratories
    - SARS (3 / 11: Hong Kong labs)
    - Influenza H5N1 (2/6: Hong Kong labs)
    - Specimens were sent to labs in Hong Kong for:
      - SARS (Mainland China, Jan 2004)
      - H5N1 (Human, Viet Nam, Jan 2004)
      - H5N1 (Animal, Viet Nam, Feb 2004)
      - H5N1 (Animal, Mainland China, Apr 2004)
      - SARS (Mainland China, Apr 2004)
Roles of Hong Kong in global & regional effort

- **On-site Support**
  - Clinical team to Viet Nam on H5N1 (Feb 2004)
  - More potential
    - Various expertise in Hong Kong
    - Practical experience
Roles of Hong Kong in global & regional effort

- **Capacity building**
  - Each country should have core capacity to contain disease in early stage
  - **Training**
    - Laboratory
    - Epidemiology
    - Infection control etc.
Thank you