Session 3
Prioritizing Our Actions
Avian Influenza (China)

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Human Health Sector

• Surveillance
  – Routine surveillance
    • Sentinel surveillance
      – Influenza like illness (ILI) surveillance -- outpatients
        » Covered 31 provinces, involved 554 sentinel hospitals, 408 labs
      – Severe acute respiratory illness (SARI) surveillance – hospitalized cases
        » Covered 25 provinces, involved 25 sentinel hospitals, 25 network labs
    • Unknown Etiology Pneumonia cases surveillance
      – Covered all types of health facilities in 31 provinces, including hospitals, clinics, etc
    • Laboratory based, Hospital-based
  – Emergency Surveillance
    • Enhance surveillance and close contacts in the surveillance scope when human AI cases appear
  – Events surveillance: ILI outbreak, human AI cases cluster
ILI and Virological Surveillance Network

63 Laboratories
197 Sentinel Hospitals

Oct 2005 to May 2009

409 Laboratories
554 Sentinel Hospitals

Since June 2009

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<th>Laboratories</th>
<th>Sentinel Hospitals</th>
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<td>63</td>
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The map shows the distribution of laboratories and sentinel hospitals across China and other regions, indicating the surveillance network's coverage and expansion over time.
Human Health Sector

• Key concerns of risk assessment
  – Location, and population affected by AI
  – Changes: genetic changes, receptor binding, susceptibility to antiviral treatment, infectivity in animal and human; pathogenicity to different animals and human.

• Frequency of Risk Assessment
  – Regular risk assessment (monthly)
  – Information exchange with animal health sector
  – Dynamic risk assessment as necessary
Human Health Sector

• Response

- Report suspected human AI cases
- Field investigation
- Case management
- Infection control
- Contacts tracing
- Medical observation
- Emergency surveillance
- Risk communication

If there is sick or dead poultry

Health Administrative sector

Animal health sectors

Local CDC

Hospital
Animals Health Sector
National Medium and Long-Term Program for Animal Disease Control

Promulgated on May 2012, by The State Council.

Animal Health Sector

- **Response process and measures upon outbreaks**
  - Outbreak reporting
  - Confirmation
  - Movement control
  - Culling
  - Bio-safety disposal
  - Removal of blockade
Animal Health Sector

• Surveillance of AI outbreak
H7N9 Surveillance from 2014 to 2017
(serological sample and aetiological sample tested)
Emergency Reaction of AI

Emergency Reaction of AI

受威胁区
Buffer Zone

疫区
Culling area

10 or 30 km

Outbreak area

3 km

疫点

Closure livestock markets

关闭活畜交易市场
Joint Risk Assessment

• H7N9 AI outbreak
  – Mutual information notification timely
  – Virus sharing, genetic and antigen analysis, transmission and virulence ability assessment
  – Joint emergency response mechanism----Multi-sectoral cooperation mechanism for disease prevention and control, joint effort to investigate and control the source of infection
Joint Risk Assessment

- Expert consensus on novel findings----On Feb 2017, experts from both health and agricultural department held a seminar, reached a consensus for the epidemic control of H7N9 in China, and published the report on professional journals of both systems

*One voice* from human and animal health experts
Joint Risk Assessment

- Multi-level joint prevention and control working mechanism

National joint prevention and control working mechanism

Provincial and local joint prevention and control working mechanisms

Trans-region joint prevention and control working mechanism

Joint prevention and control working mechanism of professionals
Successes – Human-Animal Interface Risk Assessment

• Response together----“Three simultaneity”, health and agricultural department to act together at the same time on following
  – Present at the epidemic/outbreak spot
  – Conduct Investigation and testing
  – Take control measures
Challenges – Human-Animal Interface Risk Assessment

- Limited workforce of health workers, both for human and animal sectors.
- The poor awareness of the animal health and the threats of sick animal to human in some areas.
- Cross-regional transportation of live poultry
  - ~80 million live poultry moved among different provinces every week
- Pattern of poultry farming, circulation and sale in China
  - Large, small poultry farms, and raised at backyard
  - “Company Plus Farmers” model
  - Live poultry sold in the market
Suggested way forward

- Capacity building of the workforce of human and animal health sectors at the grassroots level.
- To jointly improve the operational protocol of AI prevention, surveillance, risk assessment, investigation and disposal, etc. by expanding the partners, i.e. the wet market management depart...
- Promote long-term control measures like centralized poultry slaughtering and modernization of poultry raising
- Awareness enhancement of One Health among the officers of governmental departments, experts, farmers, as well as all the stakeholders relevant to animal raising, transportation, sale, processing, etc.
Thank you!