AVIAN INFLUENZA (H5N1) CONTROL AND PREVENTION IN INDONESIA

The Republic of Indonesia
The Imperative is Clear

“...all our development calculations and projections would be ruined, if humanity were to experience an avian flu, human influenza pandemic. This could happen, if there is a mutation of the avian flu virus, that can spread between humans. And this virus can mutate anywhere, in China, in Europe, in Southeast Asia...The impact of a new pandemic on the economies of the world, would be totally disastrous...That is why, we must all be on the high alert...”

Dr. Susilo Bambang Yudhoyono
President of the Republic of Indonesia
In a speech to the
Sixth Annual Conference of The Parliamentary Network of the World Bank
Helsinki, Finland, 23 October 2005
Task is Enormous and Complex

- Large, geographically disbursed country
  - Population 220 million, huge population of poultry
  - High diversity of wild animals (especially birds),
  - Large area to cover (1.9 million sq km)
  - AI endemic in 23 of 33 provinces

- Highly decentralized
  - 400+ districts with elected local government
  - Health and Agriculture functions delivered by districts and provinces, with limited national control

- Effectiveness of alternative options to control AI at source still unproven internationally
Avian Flu Situation
Indonesian Poultry Economy

- Total Investment : US$ 35 billion
- Money Circulation : US$ 30 billion/year
- Manpower : 10 millions
- DOC broiler prod : 1 billion/year
- Breeding chicken : 20 million
- Layer population : 80 million

Poultry Production Structure

Total poultry population: 1.3 billion

- Sector 1 (Industrial integrated)
- Sector 2 (Medium scale)
- Sector 3 (Small scale)
- Sector 4 (Backyard farm)

80% poultry population
20% poultry population
30 mill households
## Chronology of AI Pandemic in Indonesia

<table>
<thead>
<tr>
<th>Phase</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Prior July 2005</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Aug 03: First Reported outbreak in poultry</td>
</tr>
<tr>
<td>Phase 3</td>
<td>July 05: Human infection confirmed</td>
</tr>
<tr>
<td>Phase 4</td>
<td>Indonesia is in phase 3</td>
</tr>
<tr>
<td>Phase 5</td>
<td>19 Sept 05: “Status of Unusual Event” Declared</td>
</tr>
</tbody>
</table>

### As of 1 November 05:

- The AI cases has spread to 8 provinces (in 4 most populous islands: Java, Sumatra, Kalimantan, Sulawesi)
- Total 40 cases resulting 15 deaths (33% fatality rate)
As of October 2005

Since the first reported outbreak (August 2003), AI has spread progressively. As of August 05: 10.3 million poultry deaths
Policy Direction, Current Activities and Problems Faced
A Call for Action: President’s Instructions
(20 September 2005)

1. Quick and prompt measures on infected human and poultry
2. Prevent the spread of diseases through localization
3. Utilize fund from each ministry for prevention and cure
4. Undertake public awareness campaign
5. Establish AI forum for synergizing efforts (*)
6. Closely work with international community
Agriculture – Current Activities

1. Surveillance and virus spread mapping
2. Mass vaccination of 190 millions of poultry
3. Depopulation (selective culling) and compensation
4. Increased biosecurity to prevent contact/spread. Targets: commercial poultry production and backyard farms
5. Control movement of live poultry, poultry product and farm waste.
6. Public awareness and campaign on safe consumption of poultry products
7. Dissemination of guidance on AI prevention and control.
Agriculture – Main Difficulties Faced

Surveillance and Reporting:

- Limited veterinary laboratories (only 7 regional labs),
  - Limited human resources vs area covered, including limited number of veterinarians at local level in most provinces
  - Lack of regulatory framework and mechanism for compulsory reporting from private sector and people at large

**Current system**: Field → district → province → DG Animal Health (monthly & emergency 24 hours), but lack of capacity, funding, information → make them not working properly.

- Early reporting from the local government not in place due to limited capacity and capability for early detection in the field
Agriculture – Main Difficulties.. (cont’d)

Vaccination of Poultry:
- Evidence of efficacy not yet established – limited monitoring and evaluation, including weak vaccination recording (illegal vaccine circulation difficult to monitor; limited local production of vaccine)
- Limited coverage due to large area, small scale farms, limited equipment (syringe, refrigerator, etc) and storage capacity in province/districts

Culling:
- Level of financial compensation for depopulation doesn’t provide incentive for farmer cooperation – needs to be reviewed and clarified (low participation; appropriate procedure need to be established and followed)
- Difficult to effectively target in absence of good surveillance, monitoring and evaluation

Budget Constraint:
- Limited budget for surveillance and compensation
- 2004 → Rp. 11.7 billion at 8 provinces, 238 districts (culling 7 million chickens)
- 2005 → fewer cases
Health – Current Activities

1. Distribute guidance and dissemination of information
2. Active surveillance (probability of new cases, monitor of closed contact person, investigation to find mode of transmission)
3. Taskforce of AI outbreak, monitor and report the progress every day
4. Outbreak response: prepare 44 hospitals for confirmed, probable and suspected cases
5. Strengthen laboratory capacity (NHRD Lab)
6. Provision of anti-viral drug (oseltamivir): 15,000 strips distributed to 33 provinces, 44 hospitals and 10 health offices and for central stocking.
7. PCR and serology testing for AI infected patients
8. Provision of personal protection equipment to 44 hospitals
9. Insurance protection for health personnel in high risk
10. National, regional & international coordination
Health - Main Difficulties Faced

1. Limited laboratory equipment and hospital supplies
2. Inadequate stockpiling of oseltamivir in 44 hospitals
3. Weak surveillance and reporting from district level
4. Need training surveillance and case management for medical doctors in health center and hospitals
5. Research and development to improve understanding of H5N1
6. Risk Communication to the public
Current support from International community

- WHO and FAO: development of AI preparedness
- Supports and commitment from WB, GTZ, Japan, Australia, Netherlands, US, Australia, and Korea and others for technical assistance, equipment, training, workshop, isolate testing, etc
Need for Better Coordination and Partnership:

Coordinated secretariat/task force to ensure concerted all-of-government response

( among/between government agencies at central and different level of government national-provincial-local)

1. Emphasize the need for:
   - a comprehensive control strategy in support of common objectives of national preparedness
   - coordinated supports of multilateral, bilateral donors, and international agencies (donor coordination)
   - increased support to health and agriculture
   - economic analysis of the likely overall costs of the failure to control avian influenza

2. Government update; exchange of information; identification of steps to be taken
NEXT STEPS
COMMON OBJECTIVES:
- Prevent the AI phase from entering the next phase of pandemic
- Treatment and care for victims (human and animals)
- Minimize losses of AI impact
- Sustainable management of AI – keep at minimum and manageable level.

CURRENT PLANS IN PLACE
- National Influenza Pandemic Preparedness Plan (NIPPP)
  Ministry of Health
- National Strategic Plan For AI Control in Indonesia 2006 – 2008
  Ministry of Agriculture

INTEGRATED NATIONAL PREPAREDNESS
- Will combine 2 core plans – with other line ministries related and coordination of national and local government program and activities and aligned with government budget
- We are optimist with the readiness and we will listen, observe and take serious note of the recommendation from this meeting.
  We welcome and encourage participation and help from international communities with a strong request to be willing to be coordinated (among donors) and between donors and GOI/line ministries.
COMMON OBJECTIVES:

- Prevent the AI phase from entering into the next phase
- Treatment and care for victims (human and animals)
- Minimize losses of AI impact
- Sustainable management of AI

HEALTH: AI Preparedness

AGRICULTURE AI Preparedness

ENVIRONMENTAL CONTROL:
- Wild animals
- Domestic animals
- Quarantine
- Neighborhood
- Open Spaces

Social Economic
- Consumption, Trade, Economic

- All relevant ministries
- National – local gov. coordination

NATIONAL SYSTEM ON AI PREPAREDNESS
ACTIVITIES IN NEED OF SUPPORT

- Strengthen Surveillance Systems for animals and humans
  - Capacity building for improved case identification (training for veterinarians, health personnel)
  - Provision of Laboratory Equipment & Additional substances
  - Operational cost in infected areas (drugs, vaccine, investigation)

- Increase Understanding of the Epidemic
  - Bio-molecular epidemiology of AI virus

- Assessment of Efficacy of Control Measures
  - Study on progressive establishment of disease-free compartments
  - Study on effectiveness of culling
  - Study on the effectiveness of AI vaccination in poultry

- Public Awareness and Risk Communication Strategy
### Estimated Funding required (MOH)

<table>
<thead>
<tr>
<th>A. Preparedness &amp; response</th>
<th>Cost (US$ million)</th>
<th>Total (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Planning and Coordination</td>
<td>1.18</td>
<td></td>
</tr>
<tr>
<td>- Surveillance</td>
<td>1.67</td>
<td></td>
</tr>
<tr>
<td>- Prevention and control</td>
<td>0.98</td>
<td></td>
</tr>
<tr>
<td>- Health system response</td>
<td>8.70</td>
<td></td>
</tr>
<tr>
<td>- Risk Communication</td>
<td>0.62</td>
<td></td>
</tr>
</tbody>
</table>

| B. Contingency Phase 4 (home treatment, hospitalization, burying corpses)* | 499.13 |

*Notes: Contingency plan will be designed when Indonesia is entering phase 4 of WHO Pandemic Phase. More epidemiological data on avian flu have to be collected and analyzed accordingly.
## Estimated Funding required (MOA)

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>Total (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthening regulation and institution</td>
<td>6.2</td>
</tr>
<tr>
<td>Improvement of coordination and cooperation</td>
<td>2.4</td>
</tr>
<tr>
<td>Increase private sector involvement</td>
<td>4.8</td>
</tr>
<tr>
<td>Disease control and rapid response</td>
<td>88.0</td>
</tr>
<tr>
<td>Research and Development</td>
<td>16.6</td>
</tr>
<tr>
<td>Capacity building</td>
<td>16.5</td>
</tr>
<tr>
<td>Zoning and compartmentalization</td>
<td>1.8</td>
</tr>
<tr>
<td>Restructuring poultry system</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>138.2</strong></td>
</tr>
</tbody>
</table>
Thank You