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Policy Opportunities for Linking Animal and Human Health

OIE Global Conference on Wildlife
“Animal Health and Biodiversity – Preparing for the Future”
23-25 February 2011, Paris, France
Approach

- Nature of problem
- Effectiveness of systems
- ‘One Health’
- The policy agenda
- Case examples
- Conclusion
Emerging Infectious Diseases (EIDs)

- Previously unrecognized; increased incidence in new populations/geographic areas
- Examples
  - H5N1/H1N1
  - SARS/HIV AIDS/Ebola
  - Nipah Virus/Equine Morbillivirus/Menangle Virus
  - Lyssavirus/JE/RVF/Monkey Pox
  - FMD/PRRS/BSE
The growing importance of the zoonotic potential of animal pathogens

- 60% of human pathogens are zoonotic
- 75% of emerging diseases are zoonotic
- 80% of agents with potential bioterrorist use are zoonotic pathogens
- One new disease every year
Pathogen risk factors

<table>
<thead>
<tr>
<th>All pathogens</th>
<th>EIDs</th>
<th>OIE list</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human</strong></td>
<td><strong>Domestic animals</strong></td>
<td><strong>Domestic carnivores</strong></td>
</tr>
<tr>
<td><img src="image1" alt="Human Pathogen Diagram" /></td>
<td><img src="image2" alt="Domestic Animals Pathogen Diagram" /></td>
<td><img src="image3" alt="Domestic Carnivores Pathogen Diagram" /></td>
</tr>
</tbody>
</table>

**Figure 1.** Taxonomic classification of (a) all human, livestock and domestic carnivore pathogens, (b) emerging pathogens and (c) OIE-listed pathogens.
Predisposing Factors

- Flow of commodities and people
- Environmental degradation
- Climate variability/climate change
- Increasing global population
- Increasing animal protein consumption
- Global intensification of animal production
- Biodiversity loss
- Risky behaviours/practices
Impacts of EIDs

- Animal mortality / human deaths (e.g. HPAI, Ebola)
- Culling of affected and at-risk animals
- Trade restrictions
- Loss of livelihood
- Public unrest
- Threat to business and diplomatic relations
- Massive economic losses
Socio-economic impacts of diseases

- Since mid-1900’s > $100 billion
- H5N1: 0.7% GDP in South East Asia
- H5N1: human pandemic c. $US2 trillion
- SARS: $US60 billion
- FMD Australia: $AUS13 billion
- FMD Philippines: ~$US12 million (cost of eradication only)
- Small farmers/development
- Production losses of >20%
Population growth increase by 50% by 2050

In 2007, over 21 billion food animals were produced for over 6 billion people

By 2020 the demand for animal protein up by 50% mainly in developing countries requiring over 30 billion animals
Wildlife factor

- Forest encroachment
  - Nipah, Hendra and Ebola

- Bush meat
  - (HIV and chimpanzee)

- Exotic animal farming
  - SARS

- Trade in exotic animals
  - Monkey pox, psittacosis
  - 37.8 million counted animals imported in USA from 163 countries in 2000-2004
EIDs and Risk

- The risks are increasing
- The nature of risks are changing

Reuters Photo: NABC
Constraints (1)

- Structural separation of veterinary and human medical science disciplines
  - Reductionism/ specialisation
- Lack of attention to the role of wildlife in disease evolution and spread
  - Concentration on production animals and trade
  - Neglect / other priorities
Constraints (2)

- US Surgeon General 1967
  - ...time to close the book on infectious diseases
- Emphasis on response
- H5N1 and political support
  - International Ministerial Conference on Animal and Pandemic Influenza (IMCAPI)
‘One Health’ and EIDs

- Linkage in human, animal and ecosystems domain and collective approaches to control EIDs and support environmental conservation
- Traditional thinking of linear cause and effect and difficulties in producing easy solutions
- More functional than structural
- Still needs specialised approaches to support
The Policy Agenda (1)

Millennium Development Goals (MDGs)

- 8 goals to be achieved in 2015, including:
  - Eradicate extreme poverty and hunger
  - Combat HIV/AIDS, malaria and other diseases
  - Ensure environmental sustainability
  - Develop a global partnership for development
The Policy Agenda (2)

Paris Declaration and Accra Agenda for Action

- **Paris declaration**
  - Commitment to increase effort to harmonise, align and manage aid
  - Results with monitorable actions and indicators

- **Accra Agenda for Action (AAA)**
  - Agenda to accelerate progress
  - Strengthens country ownership
  - Promotes capacity development of all stakeholders
The Policy Agenda (3)

**Biological Diversity and Climate Change**

- **UN Convention on Biological Diversity**
  - Article 6: The development of national biological diversity strategies/action plans

- **UN Framework for Climate Change**
  - Launching of national strategies for addressing greenhouse gas emissions
  - Provision of financial and technological support to developing countries
The Policy Agenda (4)

ASEAN and IMCAPI

- **Association of South East Asian Nations (ASEAN)**
  - Supporting animal health sector towards greater contribution to multi-sectoral cooperation on public health

- **IMCAPI**
  - Hanoi Declaration
  - Move from emergency to long term integrated approach (sustainable, with adequate funding)
Food Security and Biodiversity

- Imbalance between global population (demand) and food production (supply)
- Decline in biodiversity = unsustainable food supply
- Need for policies on agriculture, incentives, markets or consumption patterns
  - Addis Ababa principles and guidelines for the sustainable use of biodiversity – framework to aid Governments/other stakeholders conserve biodiversity and address poverty alleviation/food security
Fifth Strategic Plan 2011-2015

- Applies ‘One Health’ concepts at the human-animal-ecosystems interface
- Supports poverty alleviation and food security by addressing animal and aquatic health issues
- Understands and manages the effects of environmental and climate change on animal health and production
The OIE collaborates with governments, stakeholders and donors.
The OIE PVS Tool

Evaluation of the Performance of Veterinary Services

a tool for the Good Governance of Veterinary Services
A stronger collaboration between WHO, FAO and OIE

Sharing responsibilities and coordinating global activities to address health risks at the animal-human-ecosystems interfaces
Countries promoting ‘One Health’ approach

- Thailand
- Indonesia
- Vietnam
- India
- Bangladesh
- Philippines
- Several events this year
  - UNSIC, APEC, FAVA, Melbourne
  - OIE Global Conference on Wildlife
Philippine Inter-Agency Committee on Zoonoses

- Aims to institutionalize collaboration between the animal, human and ecosystem sectors
- Existing collaborative mechanisms will be strengthened to control and eventually eliminate existing zoonoses
- Technical working group: Department of Health, Department of Agriculture and Department of Environment and Natural Resources
- WHO, OIE and FAO will act as advisers to the PhICZ
Australian Animal Health Laboratory – Reference Centre

Geelong, Australia

Picture courtesy of Dr Wilna Vosloo
Conclusions

- Policy agendas support linking animal and human health
- The ‘One Health’ Framework provides a foundation to do this
- But ‘One Health’ is not formula or structurally driven - it is a cooperative framework with activities customized to support needs
- Efforts to support wildlife health as a mainstream activity should be strongly supported
Acknowledgments

- OIE
- FAO
Thank you for your attention

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