NETWORKING: OFFLU EXAMPLE

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OFFLU Network of Animal Influenza Experts

OIE (World Organization for Animal Health) and FAO (Food and Agriculture Organization of the United Nations)

Animal InFLUenza Network: 6 continents, 26 countries, 60 experts

Avian (poultry and wild birds), equine and swine influenza expertise including OIE Reference Laboratories and FAO Reference Centres for Avian Influenza, OIE Reference Laboratories for Equine Influenza, OIE Collaborating Centres, OFFLU regional laboratory contacts for avian influenza, current members of OFFLU swine influenza group, and specific staff at OIE and FAO with responsibilities to OFFLU
Engaging and coordinating with others

- EU
- WHO
- CDC
- STAR
- IDAZ
- NIH
- CEIRS
- EFSA
- IFAH
- IPC
- NPB
- FEI
- IEC
Communication Tool: http://www.offlu.net/

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OFFLU’s Mission

Provide expertise for early recognition and characterization of emerging influenza viral strains in animal populations, and effective management of known infections, thereby better managing the risk to human health and promoting global food security, animal health and welfare, and other community benefits derived from domestic animals and wildlife.
OFFLU Technical Activities

- Biosafety (minimum biosafety requirements for handling animal influenza viruses)
- Development of standardized reference materials (e.g. H5 antisera)
- MTAs and Code of conduct group
- RNA standard
- Training
  - Applied epidemiology group
  - Proficiency testing/ring Trial
  - Research agenda
- Swine influenza group
- Vaccination group
OFFLU T.A. Outcomes

Applied Epidemiology Group: OFFLU Surveillance Strategy

• Highlight
  – Objectives and benefits for surveillance in each animal species
  – Influenza in poultry, wild birds, pigs, horses
  – Pandemic H1N1 2009 in pigs and turkeys
  – Approaches and options to surveillance
  – Options for appropriate actions
• Provide high level strategic guidance
• Coordinate and harmonize approaches to animal influenza surveillance
• Worldwide relevance

Proficiency Testing/Ring Trial

- Two OFFLU global proficiency test completed. Third in progress.
- Reference labs plus 11 regional labs participated (Brazil, Colombia, Chile, South Africa, Botswana, Ethiopia, Nigeria, Vietnam, Thailand, Senegal, Malaysia).
- Real time PCR detection of AI strains using a panel of inactivated influenza viruses from different geographical regions.
- Helps in consistency in diagnostic testing by labs worldwide.
OFFLU Research Agenda

- Comprehensive list of research priorities on avian (poultry and wild birds), swine & equine influenza
- Two editions:
  - 2011: An OFFLU Agenda for Influenza Research Priorities in Animal Species
  - 2014: OFFLU-STAR IDAZ Global Animal Influenza Research Agenda
- Research needs:
  - Surveillance and risk assessment
  - Diagnostics development
  - Prevention and control interventions (risk management)
  - Vaccine development and delivery mechanisms
    - Host-pathogen interaction
    - Socioeconomics and policy
OFFLU T.A. Outcomes

OFFLU Swine Influenza Virus group

- Global experts on swine influenza
- Represents both animal and public health
- Activities:
  - Provide expert opinion and technical advice to international organizations and other relevant stakeholders
  - Gather, exchange, and disseminate global knowledge of SIV and keep under continuous review
  - Identify and define gaps in knowledge in surveillance and research
  - Evaluate and communicate information regarding viruses posing potential risk to veterinary and public health
Vaccination Technical Activity

- Recommendations on Avian Influenza Vaccination, Verona, 2007
- OFFLU vaccination technical meeting, Beijing, China, 2013
- WHO VCM consultation, twice per year
- OFFLU avian influenza vaccine guidance
- Generic and specific guidance for HPAI vaccine seed strain selection
- Equine influenza vaccine strain recommendation
OFFLU Research Projects (lead by influenza experts)

- Indonesian H5N1 HPAI Vaccine Efficacy Project (2007-2010)
- Egyptian H5N1 HPAI Vaccine Efficacy Project (2008-2011)
- Avian Influenza Vaccine and Vaccination – 69 countries (2010-2011)
- Evaluation loop mediated isothermal amplification (LAMP) for avian influenza diagnosis
- Collection, analysis and documentation of hemagglutinin cleavage site sequence data of HPAI viruses for regulatory definition of HPAI viruses
- OFFLU review of avian influenza surveillance and epidemiological projects in some European, African, and Asian countries
OFFLU Collaboration with WHO

• A great success!
• On going 2-way exchange of virological and epidemiological information (both official & non-official)
• Technical collaboration at all levels
  – Pandemic H1N1 2009 first test of collaboration
  – H7N9 LPAI in China in 2013-2014
• H5N1 HPAI virus nomenclature group
• Exchange of influenza viruses under PIP framework
• FLURISK and CDC Risk Assessment initiatives
• WHO participation in OFFLU working groups and meetings
• Example of early sharing of genetic and antigenic data and their analysis from OFFLU Reference Labs and parent organizations
  – Initially H5N1 HPAI, expanded to all H5 and H7 HPAI, H9N2 LPAI, and other LPAI viruses
• Includes ferret antisera production and use for antigenic analysis
Scientific networking through OFFLU

Technical Meetings

- OFFLU applied epidemiology technical activities meeting (2008, Paris)
- Regional avian influenza vaccination meetings (Indonesia [2] and Egypt [1])

Seconding of Technical Experts

- Provide technical expertise on focused projects and activities, and organize high priority meetings and conferences
- Builds network capacities within parent organizations
- Anja Globig (FLI), Stephanie Sonnberg (St Judes), Stacey Schultz-Cherry (St Judes), David Swayne (USDA), Mia Torchetti (USDA), Erik Karlsson (St Judes)
OFFLU Response to H7N9

- OFFLU engaged influenza expert laboratories to compiled laboratory decision trees, protocols and validation data for detection and characterisation of H7N9 LPAI virus, and biology of the H7N9 infections in poultry
- Assessment of epidemiology and diagnostics in the field situation
- Rapid data exchange mediated through OFFLU between WHO, OIE and FAO
- Information directly informed global preparedness
Conclusions

- Network of over 60 global experts in animal influenza
- Expertise and mandate covers avian (poultry and wild birds), equine and swine influenza
- Exchange scientific data and biological materials (including virus strains)
- Provide technical advice, training and veterinary expertise to Member Countries
- Collaborate with the WHO influenza network on animal-human interface, including human pre-pandemic vaccines
- Highlight influenza research needs, promote their development and ensure coordination
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