



FAO/OIE
GF-TADs

GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES

AVIAN INFLUENZA: INTERSECTORAL COLLABORATION

Larnaca - Cyprus

20 - 22 July 2009

Report

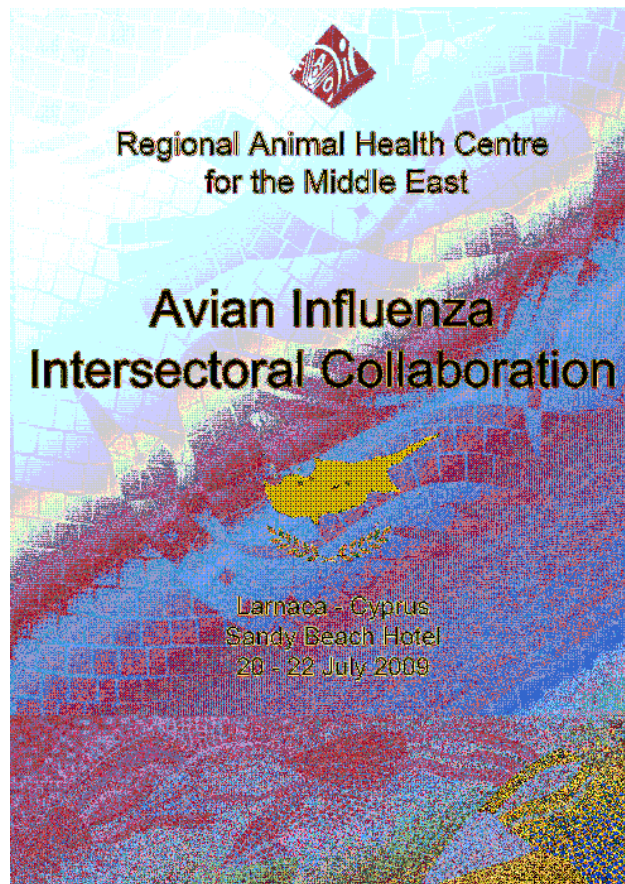


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Acronyms

AI:	Avian Influenza
AIV:	Avian Influenza Viruses
CVO:	Chief Veterinary Officer
EU:	European Union
EC:	European Commission
ECTAD:	Emergency Centre for Transboundary Animal Diseases
FAO:	Food and Agriculture Organisation
GF-TADs:	FAO – OIE Global Framework for the progressive control of Transboundary Animal Diseases
HPAI:	Highly Pathogenic Avian Influenza
IC:	Intersectoral Collaboration
IV:	Influenza Viruses
LPAI:	Low Pathogenic Avian Influenza
MZCC:	WHO Mediterranean Zoonosis Control Centre
OFFLU:	Joint OIE-FAO network of expertise on animal influenza
OIE:	World Health Organisation for Animal Health
OWOH:	One World – One Health
RAHC:	OIE-FAO Regional Animal Health Centre
RT-PCR:	Real Time – Polymerase Chain Reaction
SIV:	Swine Influenza Viruses
UNICEF:	United Nations Children's Emergency Fund
UNSIC:	United Nation System Influenza Coordinator
VS:	Veterinary Services
WB:	the World Bank
WHO:	World Health Organisation
WTO:	World Trade Organisation

Participating countries:

Bahrain – Cyprus – Egypt – Iran – Jordan – Kingdom of Saudi Arabia (KSA) – Kuwait – Lebanon – Oman – Qatar – Somalia – Syria.

Proceedings of the Meeting

The OIE – FAO Regional Animal Health Centre for the Middle East, under the auspices of the Global Framework for the progressive control of Transboundary Animal Diseases (GF-TADs), with the collaboration of the Ministry of Agriculture, Natural Resources and Environment of Cyprus, organized in Larnaca, Cyprus, from 20 to 22 July 2009 a meeting, entitled "Avian Influenza: Intersectoral Collaboration".

Even if highly pathogenic avian influenza H5N1 has been eradicated in poultry in most countries where it had appeared, it remains entrenched in a few countries which may put the whole planet at risk.

To ensure the eradication of the disease in poultry, good governance of veterinary services is a priority in order to implement relevant early detection and rapid response mechanisms.

To be effective, those mechanisms must also been integrated, in each country, in a general frame associating other institutional or private sectors, especially public health.

During the meeting an update of Influenza Viruses and the situation of the H5N1 Highly Pathogenic Avian Influenza were made by experts from the OIE, the FAO and participating countries with added discussion on the current pandemic H1N1 2009 influenza virus and on Swine Influenza Viruses (SIV), followed by active and large discussion between participants.

It was also the opportunity to present and share experiences, at national, regional and international level, on collaboration mechanisms between different sectors involved in the control of animal diseases.

A forum of discussion underlined that communication and awareness programmes represent for Veterinary Services a crucial task.

Welcoming Address

In the opening ceremony, Dr Charalambos Kakoyianis, CVO of Cyprus and OIE Delegate welcomed all the participants and expressed his pleasure for hosting this meeting in Cyprus. He highlighted the support of the Cypriot Ministry of Agriculture, Natural Resources and Environment to hold this meeting in Larnaca. He pointed out the importance of this meeting which would help the entire region in the analysis of updated information on influenza viruses and experiences in intersectoral collaboration, essential to fight animal diseases. He wished all participants a pleasant stay in Cyprus.

On behalf of the FAO, Dr George Khoury, Regional Coordinator of the ECTAD Unit for the Middle East, expressed its sincere thanks to the government of Cyprus to hold this important meeting which objective is to share updated information on influenza virus and experiences on the influenza disease control through intersectoral collaboration. He highlighted that this workshop is another effort of the Regional Animal Health Centre (RAHC) for the Middle East in the way of building reliable and competent system to prevent and control animal diseases in the region.

Representing WHO, Dr Aristarchos Seimenis, Director of the Mediterranean Zoonosis Control Centre in Athens, Greece, insisted on the importance of horizontal collaboration and coordination between all sectors to efficiently prevent and control zoonoses and foodborne diseases of animal origin. He thanked the organizers and the Government of Cyprus for inviting the MZCC at this meeting.

Dr Yehia, OIE Regional Representative for the Middle East, thanks the Ministry of Agriculture, Natural Resources and Environment of Cyprus for its strong support and welcomed all the participants. He underlined the necessity of this meeting in the way forward fighting against Avian Influenza under the Umbrella of the OIE/FAO GF-TADs, in the framework of "One World – One Health" vision and according to the Action Plan of the OIE-FAO Regional Animal Health Centre as adopted during the 4th Regional Steering Committee of the GF-TADs.

The full version of each speech is reported page 45.

Session 1: Influenza viruses – Current situation

Influenza Viruses – a review

Dr Kate Glynn, OIE Scientific Department

Influenza viruses, belonging to the Family *Orthomyxoviridae*, occur worldwide in many animal species including humans.

There are three main genera, classified as Influenza A, B, and C. Of these, Influenza B and C affect only or predominantly humans.

Influenza A viruses, the most virulent types in general, affect a wide range of species, most commonly humans, pigs, horses, and birds.

Influenza viruses are negative single-stranded RNA virus, with 8 gene segments that code for 11 proteins.

Influenza A viruses are classified in subtypes based on their two major surface glycoproteins, hemagglutinin (H) and neuraminidase (N). All influenza A viruses are believed to originate in wild avian species; the 16 known H subtypes and the 9 known N subtypes have all been identified in these wild aquatic birds.

Genetic shift, genetic drift, and reassortment during viral replication support the ongoing development and subsequent spread of new strains and subtypes of Influenza A viruses. In general, strains of certain influenza A subtypes infect specific hosts, but interspecies transmission has been clearly documented, most notably with the H5N1 strain of highly pathogenic avian influenza that has caused a panzootic among domestic poultry and been associated with more than 400 confirmed human cases, including 262 deaths, reported to WHO as of July 2009.

In mammalian species, influenza is usually a respiratory disease, and spreads via the respiratory route, while in many avian species the gastrointestinal system plays a larger role. Vaccination has been identified as the main control measures to prevent influenza. Influenza vaccines are available for humans, swine, horses, and poultry.

Highly Pathogenic Avian Influenza - Worldwide situation

Dr Ghazi Yehia, OIE Regional Representative for the Middle East

Since 2003, a total of 62 countries or territories have reported the occurrence of highly pathogenic avian influenza (HPAI) virus subtype H5N1. In late 2003 and in 2004 the disease was restricted to south-East Asia. But in 2005 it spread to Central Asia, Russia and Eastern Europe. In 2006, it reached the African continent and the Middle East for the first time and spread to Western Europe, where mainly wild birds were infected.

In the Middle East, since March 2008, no outbreak has been reported, except in Egypt, which declared to the OIE the 07 July 2008 that HPAI H5N1 is considered now as endemic in the country. 1423 outbreaks were reported to the OIE since February 2006 and about 1 million birds have been already destroyed. 81 human cases were also reported with 27 deaths.

Several lessons have been learnt from this crisis:

- Early detection and rapid response have prevented the disease's establishment in the majority of the infected countries;
- Delayed detection and response have led to entrenched disease (Indonesia, Nigeria, Egypt);
- Strong governance and efficient national chain of command are essential;
- Compensation is crucial to encourage transparency and biosecurity measures;
- Vaccination can limit spread, but if used alone and with no permanent monitoring it does not eliminate H5N1;
- Authoritarian policies to change poultry production systems are often inefficient and can be dangerous;
- Different strategies to control the virus can be efficient (e.g. Vietnam and Thailand);
- Each country should develop a strategy based on their own situation;
- The role of public and private veterinary networks is crucial;
- Inter-sectoral collaboration is essential.

Thus, since 2007 there is a trend of decline of HPAI H5N1, in both the number of affected countries and the number of notified outbreaks. This situation was reinforced in 2009.

Nevertheless H5N1 is still a threat of high concern for all Middle Eastern countries considering that the virus has become endemic in some countries, such Egypt. Efforts should be continued and strengthened by countries that permanently notify new outbreaks so to eradicate the disease in birds and protect human health.

Influenza – OIE Standards and Communication on Influenza A (H1N1)

Dr Kate Glynn, OIE Scientific Department

The OIE is the international standard setting organisation for animal health and international animal trade. The standards for terrestrial animals (mammals, birds and bees), democratically approved by OIE Members, are presented in the OIE Terrestrial Animal Health Code (the Terrestrial Code) and the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, and are continually updated to reflect current scientific knowledge.

The Terrestrial Code includes requirements for Members to report the occurrence of OIE listed diseases and emerging (non listed) diseases with significant morbidity / mortality or zoonotic potential. Both avian influenza, defined as highly pathogenic avian influenza in birds and low pathogenicity notifiable avian influenza in poultry (as defined in Chapter 10.4. of the Terrestrial Code), and equine influenza are OIE listed diseases.

Although “classical” swine influenza is not an OIE listed disease, animal health issues related the “pandemic H1N1 2009” influenza virus, currently circulating among humans worldwide have been addressed by the OIE since the virus emerged among humans in April 2009. Taking into account all available scientific information, OIE considers that the recommendations issued since the first appearance of the pandemic H1N1 2009 virus are still valid. National Veterinary Services must effectively monitor animal populations for clinical signs of respiratory disease, use appropriate confirmation diagnostic methods and rapidly report occurrences of the disease in animals, if any, to the OIE by using the qualification of “emerging disease”. Should the presence of the pandemic H1N1 2009 virus be detected on a farm, the holding should be placed under official surveillance and control of movements should be applied; the transfer of pigs from the farm to the slaughterhouse can be done using basic bio security measures. The culling of pigs will not help to guard against public or animal health risks presented by the virus. As for any other disease, slaughtering of sick pigs for human consumption is not recommended. The imposition of ban measures related to the import of pigs and pig products from countries with human or animal cases are pointless and do not comply with international standards published by the OIE and all other competent standard setting international bodies for animal health and food safety. If a country elects to cull pigs on the basis of the principle of precaution, culling of animals should always be carried out in accordance with OIE international standards found in the Terrestrial Code on animal welfare and killing methods for disease control purposes. Finally, pork and pork products, handled in accordance with good hygienic practices jointly recommended by the WHO, FAO, *Codex Alimentarius Commission* and the OIE, are not a source of infection from the virus.

The OIE strongly encourages the effective implementation of international standards by all Member Countries and Territories and offers its assistance to any Member wishing to comply with its standards.

Discussion

Several questions from the audience concerned influenza viruses subtype denomination. Dr Glynn reiterated that subtype designation doesn't provide much useful information about a specific virus, because within the same subtype a lot of genetically different viruses exist.

Then most of the discussion concerned the pandemic H1N1 2009 strain, its possible origin, its epidemiology and notably relations of this strain with the swine influenza viruses (SIV) group.

Dr Glynn explained that swine influenza is a mild disease in pigs, predominantly a respiratory syndrome affecting production units.

The situation is very different for Avian influenza viruses (AIV), which are responsible of very severe systemic diseases in poultry and incriminated as the influenza precursors for the main human pandemics the world previously known (1918-19, 1957, 1968). Because swine influenza is a mild disease in pigs and has only uncommonly resulted in related infections in humans, which appear very similar to human seasonal influenza, it has not gained the global attention that avian influenza has; as a result of these factors, fewer sequences of SIV have been recorded in international genetic databases than is seen for avian influenza.

Regarding the actual pandemic strain, Dr Glynn and Dr El Idrissi stressed that, even if the virus most closely related to the pandemic H1N1 2009 virus was identified to an influenza virus identified from a pig, the pandemic virus is actually spreading through the human population like a human disease. According to the particular epidemiology of influenza viruses, this virus is, however, capable of infecting pigs. This has already been reported in Canada and Argentina. In previous human influenza pandemics, similar influenza strains were also later identified in pig populations.

Dr Glynn highlighted that it is a public health benefit to minimize the spread of this pandemic H1N1 virus into the pig population to limit future reassortments or other changes to the virus, based on the fact that pigs can be infected by swine, avian and human influenza viruses, potentially playing a role of mixing vessel.

Thus biosecurity measures should be reviewed and where necessary enhanced in pig production. Such recommendation has been made both by the OIE and FAO in April 2009, when the human pandemic crisis started. On this particular point, Dr Glynn and Dr El Idrissi informed the audiences that the two organisations are collaborating on guidelines for good biosecurity measures in pigs farms, led by FAO, such as they have done on poultry farms.

Dr Glynn invited the assembly to read carefully all the statement made by the OIE, FAO, WHO and WTO, all available on the OIE and FAO websites. She reiterated that human and swine influenza viruses are not transmitted to humans by food and that pork and pork products are safe for human consumption, if they are, of course, produced in compliance with OIE and *Codex Alimentarius* Standards.

Dr Yehia mentioned also that all the statements made by the OIE and its partner organisations (FAO, WHO and WTO) have been translated into Arabic and published on the website of the Regional Representation for the Middle East.

Dr El Idrissi explained also that OFFLU, the joint OIE-FAO network of expertise on animal influenza, is working on such topic and Dr Glynn mentioned that a lot of information is available on the OFFLU website regarding on surveillance, sampling and shipping.

Dr El Idrissi underlined also that the potential pandemic of H5N1 shall not be forgotten and that H5N1 is still a big threat. He also mentioned with regard to the region of Middle East that

H9N2 is circulating largely in poultry population in many countries of the region and although this type is considered up to now as a low pathogenic virus it should not be overlooked as it may change to a dangerous virus.

Dr Glynn mentioned that IV are widespread and common, that they rapidly replicate, and spread efficiently and effectively in multiple animal species (including humans). This spread is constantly supported by the ability of the influenza virus to mutate and reassort, resulting in the creation of new influenza strains to which limited immunity may exist.

Dr Glynn and Dr El Idrissi, consistent with OIE and FAO guidance, strongly recommended continuing efforts on surveillance (especially risk based surveillance) and control measures on influenza viruses. In particular, that Veterinary Services must ensure a high level of awareness in the veterinary and producer community and effectively monitor animal populations for clinical signs of respiratory disease.

Dr Kakoyiannis mentioned that SIV are everywhere and SIV surveillance in farms is very difficult to conduct, furthermore it is time and financial consuming for VS. Reinforcing biosecurity in farms is more efficient.

Then the discussion focused on diagnostic.

Dr Glynn explained that it is complex to diagnose this particular pandemic H1N1 2009 strain from other H1N1 in pigs, and that different strains of H1N1 are circulating among pigs in different regions. Currently there is no validated RT-PCR available to differentiate the pandemic H1N1 2009 strain from other H1N1. She stressed that RT-PCR tests developed to diagnose the pandemic H1N1 2009 strains in human may not be well adapted for differentiating this strain in pigs from other H1N1 strains. The reference test for confirmation, based on OFFLU expert opinion and as recommended by the OIE Manual of Diagnostic Tests and Vaccines, remains Virus Isolation and sequencing.

Dr Glynn informed the participants that many universities and laboratories are furiously working to develop a rapid test validated in pigs and invited the participants to visit as regularly as possible the OFFLU website, where a lot of information is available and continuously updated.

On the particular point to search the pandemic H1N1 2009 strains in other animal population, Dr Glynn explained this will be difficult but recommended to enhance general surveillance on for swine influenza among pigs with clinical respiratory illness. In pigs, as recommended by the OIE and FAO, respiratory disease should be investigated according to clinical and epidemiological conditions, and ill flu workers should not have contact with pigs until their total recovery.

To conclude Dr El Idrissi mentioned also that the OIE and FAO participate actively in the preparation of the UNSIC immediate action plan for the pandemic H1N1 2009.

Session 2: Intersectoral Collaboration – Key elements

Intersectoral collaboration: preparedness programs and emergency response

Dr Pavlos Economides, Veterinary Consultant – Cyprus

The emergence and re-emergence of influenza viruses is a continuing process involving viral and host factors. Strains with pandemic potential for humans and animals are of great concern to human and veterinary public health services. The incidence of Avian Influenza during 2003 – 2006 and Swine Influenza (2009) in the Middle East Region is presented. Regional strategies to reduce the evolution of new strains and the control of pandemics are needed. Intersectoral cooperation developed on the basis of the fundamental principles established by OIE – FAO – WHO is a prerequisite for the establishment of Early Warning Systems Preparedness and Response for the control of the Avian and Swine Influenza Pandemics.

The Veterinary Services of the Middle East Region need legal and financial support for capacity building to meet the OIE Requirements and Standards for the control of Emerging Infectious Zoonoses like Avian Influenza.

Intersectoral collaboration: communication activities

Dr Pierre Primot, OIE Regional Representation for the Middle East

In the context of HPAI and other infectious diseases in general, the delivery of accurate and relevant information that will catalyze rapid risk reduction actions/measures is essential. This is especially true for people who are at risk or believe themselves to be at risk, as well as, for those who need to make personal decisions or decisions for communities, countries or at world level. This includes individuals, public health workers, veterinarians, community leaders and politicians, non-governmental organisations and UN agencies.

During the OIE-FAO Animal Health Communicator's Roundtable, held in Rome in April 2007 experts recognised the urgent need to strengthen communication capacity and the role of communication professionals in the process of supporting responses to emerging animal diseases, including those that pose a risk to human health, specifically HPAI H5N1. Communication professionals brought specialised skills to increase and improve the effectiveness of the technical aspects of the prevention, preparedness response and recovery phases of animal disease occurrences.

The FAO-WHO-OIE series of regional communication skills-building/planning workshops led by FAO, involving the Ministries of Agriculture has specifically fore-grounded and prioritized the urgent need for continued support for strengthening communication competencies and leadership among Ministry of Agriculture.

Specifically with regard to OIE involvement, regional communication seminars have already been organised in the Americas and Asia. Next September similar seminar will be organized for the English speaking African Countries and the Regional Representation for the Middle East will organise one in April next year.

The outcomes of the OIE regional communication seminars, which are an important contribution to the communication constituency, also point to the fact that additional technical, financial, and human resources through this project will further enrich the content and activities of these much-needed capacity-building interventions.

Improving communication is a strategic element for the OIE. To be effective, this communication must be acknowledged and supported by the relevant stakeholders, first of all by national Veterinary Services. In many circumstances, lack of adequate structure and expertise in communication has led to a loss of visibility and credibility of their actions in face of scrutiny by the general public.

Along with the ancient adage "get the work done and let them know", the Veterinary Services must become fully aware of the overriding need for improved communication in order to convince and influence policy makers and civil society of the economic and social value of the missions these services perform every day.

Session 3: Intersectoral collaboration at global and regional levels

Intersectoral collaboration in the Middle East

Dr George Khoury, Coordinator of the FAO – ECTAD Unit for the Middle East

Intersectoral Collaboration in the Middle East has improved itself as a need only after the evolution of Highly Pathogenic Avian Influenza (HPAI) in the year 2005.

It is easy to define two phases before and after 2006, when the intersectoral collaboration before the HPAI crisis was in general very weak, unorganized and not very well acceptable.

After the evolution of HPAI, intersectoral collaboration introduced itself as a good and effective tool for the prevention and control of HPAI, noticeable efforts has been made to improve the intersectoral collaboration, national committees involving different sectors has been established, national preparedness plans developed and initiatives to improve the communication mechanisms and partnerships commenced to bring all concerned sector working together.

International Organization (FAO – OIE – WHO and others) played a vital role in enhancing the collaboration and publishing the concept of intersectoral collaboration.

Although the progress achieved more work has to be done to reach the international standards and procedures.

Integrative approach of influenza epidemiology

Prof. Yiannis Tselentis, WHO collaborating centre – Greece

The influenza A virus is an ideal candidate for an integrative phylodynamic approach.

The study of the antigenic and genomic data, as well as the parallel interpretation of these data using the classical epidemiologic indicators can give resolution to many crucial questions waiting to be answered:

- Interaction between immune selection pressure and virus adaptation. Partial immunity generates, strong fitness (R_0) differences among strains, leading to continual immune selection and rapid strain turnover. The viral and immune dynamics determine the trajectory of viral adaptation.
- Genetic and phenotypic diversity of HA virus. The genetic and antigenic evolution of the virus is different and as a result antigenic clusters evolve.
- Contribution of phylogenetics in explaining why the virus affects severely populations only during the second wave of pandemics. The actual research denotes that the whole genome of virus should be analyzed and not only the genes of the viral surface that is implicated in the immune reaction.
- Phylodynamic and evolutionary biology: Mathematical evolutionary models with multiple viral strains and other parameters like: the capacity of host response based in host infection history or in the response capacity to present infection; the combination of epidemiology, phylogeny and natural selection as parameters or the intensity of the cross- immune in relation to the antigenic phenotype. These parameters generate an interesting hypothesis which leads us to investigate the auto-organization of the virus structure, the immunity profile, and how this auto-organization affects the epidemic dynamic.
- Evolutionary biology and epidemic diffusion: Analysis of surveillance data in large populations, transports statistics data and genetic data have to be investigated also in other geographical areas.

One World – One Health (OWOH) concept

Dr Kate Glynn, OIE scientific Department

The "One World, One Health" concept recognizes that the emergence of disease is based in the interactions among animals, humans, and pathogens in complex ecosystems, and that the global community must devise multidisciplinary solutions in response. The global experience over the last decade responding to avian influenza in poultry and related influenza infections in humans has emphasized the need for collaboration between the animal health, public health, and wildlife sectors to prevent, detect, and control this disease. It has long been known that approximately 60 % of known human infectious diseases have their source in animals (whether domestic or wild), as do up to 75 % of emerging human diseases and 80 % of the pathogens that could potentially be used in bioterrorism. We also know that animal based proteins play a critical role in the diets of the human population, and that nutritional deficiencies can also be a public health problem. It is clear that the unprecedented movement of commodities and people can contribute to the spread and multiplication of pathogens around the world. Climate change can affect vector distribution, with the resulting occurrence of diseases in new geographic areas. Expansion of human populations into new areas, and the associated ecosystem changes, can lead to increased contact between humans, livestock, domestic animals, and wildlife. The OIE, WHO and FAO (with the support of UNICEF, the UN System Influenza Coordinator [UNSIC] and the World Bank) have prepared a consensus document on global measures needed to coordinate medical and veterinary health policies more effectively, taking into account new requirements to prevent and control zoonoses. Ultimately, the only way to address this situation, as we face these new hazards, is to adapt the existing systems of health governance at world, regional and national levels in a harmonised and coordinated manner.

The FAO Global Programme for Prevention and Control of HPAI: Fostering intersectoral coordination

Dr Ahmed El Idrissi, Animal Health Service, FAO – Rome

Since the early phase of the highly pathogenic avian influenza (HPAI) crisis, the Food and Agriculture Organization of the United Nations (FAO), together with the World Organisation for Animal Health (OIE) and the World Health Organization (WHO), have taken a lead role in providing international technical and policy support to contribute to the control of the disease in poultry and mitigate the risk of a pandemic. This joint effort has provided the platform for the animal and public health sectors to work together in seeking common solutions to the avian influenza threat.

In line with the FAO-OIE global strategy for prevention and control of HPAI, the FAO Global programme provides a framework for strengthening intersectoral coordination at all levels. The Organization works in collaboration with OIE and WHO at global level while facilitating improved synergy at the regional level and accommodating specific needs at the country level.

At the global level, a number of specific mechanisms and initiatives have been put in place in order to foster intersectoral collaboration and ensure a coordinated and efficient global response to HPAI. The Global Early Warning and Response System (GLEWS), a joint FAO/OIE/WHO platform established in July 2006 formally brings together human and veterinary public health systems to share information undertake risk analysis deliver early warning messages and advise on early response.

The OIE/FAO Network (OFFLU) is an international network of laboratory expertise on avian influenza established in April 2005 by OIE and FAO. This network promotes research, offers expertise and assistance in the control of HPAI, and cooperates with WHO on issues related to the human/animal interface. The OFFLU network includes OIE/FAO reference laboratories, epidemiology centres and expert groups in avian influenza throughout the world in the exchange of strains of H5N1 HPAI and information between the human and veterinary laboratories.

Strengthening of intersectoral coordination at the global level has been also promoted through a series of initiatives and international events. The most recent one was the tripartite technical consultation (FAO, OIE, WHO), organised in October 2008 in Verona (Italy) on Influenza at the Human-animal Interface. This joint technical consultation was a milestone towards better global understanding of avian influenza risks at the human-animal interface, sharing the benefits of research and surveillance efforts in both fields, and developing tools and systems for broader application at this interface.

At country level the animal-human health coordination is promoted in a structured or informal manner in line with the Beijing international conference recommendations for an integrated approach (January 2006). Coordination is carried out through a national Animal and Human task force or steering committee composed mostly of members from the public sector (from Ministries of agriculture / livestock, of health, of environment). This operates at an early stage when drafting integrated preparedness plans, testing the plans (desktop or field simulation) and also sometimes when implementing response (multisectoral response teams comprising not only animal health officers but also human health specialists, communication specialists, ornithologists, etc.).

Intersectoral Collaboration: a basic element for effective zoonoses control: the avian influenza issue

Dr Aristarchos Seimenis, Director of the WHO – Mediterranean Zoonoses Control Centre – Athens, Greece

Outbreaks and cases among humans from Avian Influenza (H5N1) and new Influenza (H1N1) epidemics, remind us that 75% of emerging disease pathogens are zoonotic.

Human and animal health are closely linked, therefore, collaboration between public health, animal health and other inter-related sectors is vital.

Important factors contributing to avoid emergence or early containment of zoonoses emergence include adoption of the integrated action approach and of the multidisciplinary programmes and activities. Such concept permits gathering together all sectors into a common goal.

Fundamental intersectoral provisions in addressing Avian Influenza include: effective epidemiological surveillance, biosafety, biosecurity, food safety integrated activities, public awareness, etc.

Whatever the theoretical recognition of the vital importance of I.C. there are serious problems for its implementation almost world-wide.

There is a need at country level for a high placed coordination of intersectoral action; probably a single convening authority to lead and coordinate. Such a role could be, for example, entrusted to the *National Zoonoses Committees* possessing adequate legal power. They could identify and bring together other inter-related sectors according to the case, specify norms for horizontal inter-communication among sectors, presently missing, coordinate planning and financing programmes, inform and persuade decision-makers for support commitments.

Intersectoral collaboration at regional/intercountry level is an additional important factor in addressing transboundary zoonotic diseases. Information exchange, expertise sharing, mutual technical assistance together with the support of intercountry political consensus are the main aspects for success.

International Organizations such as FAO, OIE, WHO, etc. are working together towards encouraging the enforcement of I.C. by countries seeking their support. Their role and contribution is of major importance considering the knowledge and expertise sharing, the technical support and their assistance for funds mobilisation.

There is a need to work hard for leaving aside harmful mentalities, such as “authority erosion” or “territoriality” beliefs, leading to isolation, the most dangerous approach of all times.

Intersectoral Collaboration should become the ideology and strategy of all countries in front of zoonoses endemicities, emergence of new ones and, more important, when pandemic threats could become realities.

The concept “One World – One Health”, recently rediscovered, is more than ever topical.

Humanitarian Assistance System of the United Nations and its Application in an Influenza Pandemic

Jean Luc Tonglet, Regional Office for the Middle East, North Africa and Central Asia
Office for the Coordination of Humanitarian Affairs (OCHA)

The presentation provides an overview of the humanitarian assistance system of the United Nations, outlining institutional framework and key tools and mechanisms. The UN humanitarian assistance system is based on the General Assembly Resolution 46/182 of December 1991, which aims to strengthen the UN's response to both complex emergencies and natural disasters and improve the overall effectiveness of UN humanitarian operations in the field. The Resolution created the high-level position of Emergency Relief Coordinator (ERC), who was later assigned the status of Under-Secretary-General for Humanitarian Affairs (USG). The Resolution also established coordination tools and mechanisms for the ERC, including the Inter-Agency Standing Committee (IASC), the Consolidated Appeals Process (CAP) and the Central Emergency Response Fund (CERF).

Resolution 46/182 is founded on the principle that each State has the responsibility first and foremost to take care of the victims of natural disasters and other emergencies occurring on its territory. Hence, the affected State has the primary role in the initiation, organization, coordination, and implementation of humanitarian assistance within its territory. In this context, humanitarian assistance should be provided with the consent of the affected country and in principle on the basis of an appeal by the affected country.

The UN Resident Coordinator (RC) plays a critical role in coordinating the policies, programs and actions in all countries with a UN presence. He/she is appointed by the Secretary-General, and is the most senior UN representative in-country. He represents all organisations of the UN unless they have a presence on the ground. When he takes on the responsibilities of managing and coordinating an emergency, based on a request from the affected country, he or she becomes responsible and accountable to the USG/ERC for the facilitation of the international humanitarian response to the crisis.

The cluster approach was established as part of the Humanitarian Reform to improve the effectiveness of humanitarian response by ensuring greater predictability, accountability and partnership. It is an ambitious effort by the international humanitarian community to reach more beneficiaries, with more comprehensive needs-based relief and protection, in a more effective and timely manner, in support of the efforts of the governments of the affected countries. It was emphasized that, in view of the primary role of the State in the organization of humanitarian assistance, the Humanitarian Reform can be seen as an initiative of the international community to ensure more coherent support to the efforts of national authorities.

The strategy of the UN system to address avian and human influenza is presented. Key elements of the UN Consolidated Action Plan for Avian and Human Influenza are outlined. The potential effects of a pandemic on societies are highlighted. Pandemic influenza may cause large surges in the numbers of people requiring medical treatment, temporarily overwhelming health services. High rates of worker absenteeism can interrupt essential services, such as law enforcement, transport and communications, disrupting systems on which people depend for their security, livelihoods and welfare and giving rise to humanitarian crises. This calls for preparedness involving stakeholders from different sectors.

The Concept of Operations for the UN System in an Influenza Pandemic are presented, which defines ways in which all elements of the UN System should collaborate with each other in

addressing the major challenges that are likely to be posed during different phases of a severe influenza pandemic. In a nutshell, WHO will be responsible for directing and coordinating the international health response to an influenza pandemic including assisting Member States with their health responses. The operational UN System agencies will contribute to pandemic response according to their mandate. Depending on the severity of a pandemic, OCHA will coordinate responses to potential humanitarian consequences, in support of the UN Resident Coordinators and in close collaboration with leads for humanitarian clusters and other partners.

An example of Intersectoral Collaboration: the EU model

Dr Aart Brouw, European Commission

In the European Union intersectoral collaboration between the veterinary and public health authorities is ensured via different mechanisms.

At the level of the European Commission (responsible for the day to day administration of the EU), this collaboration is ensured because both sectors fall under the responsibility of the Commissioner for Health, Ms. Androula Vassiliou. Within the Commission's Directorate General regular coordination takes place, in particular during health crises that affect both animals and humans. Although the aim of the animal health response is focussed on the one hand to allow easy trade of animals within the EU (good cooperation between animal health services and the Commission has enabled the control and eradication of some major animal diseases in the EU), another very important aim is to improve public health. On the other hand, the objective in the public health area is to improve the health of EU citizens, to coordinate the Member State response where necessary, to prevent human illnesses and diseases, and obviating sources of danger to human health. Both sides therefore have a clear interest to work together.

Harmonised legislation adopted at EU level clearly obliges both sides to work together, and this obligation is laid down in the different contingency plans prepared by the individual Member States. This includes the sharing of information and surveillance data and the cooperation at local level to protect citizens and in particular poultry workers at the time of an outbreak in poultry. This cooperation is tested during any real time exercise and the lesson learned from those exercises are used to improve the contingency plans.

To improve and stimulate such cooperation between those responsible in the Member States for public and animal health, regular meetings between CVOs and Como's are organised by the Commission. This is in addition to the meetings organised regularly between the veterinary authorities of the Member States in the Standing Committee of the Food Chain and Animal Health) and the public health authorities in the EU Health Security Committee. During times of crises, the number of meetings of these Committees will increase, and separate and more specified meetings organised. A good example of this is the brain-storming meeting of scientists organised in June 2009 following the outbreak of the influenza A(H5N1) virus. All meetings are organised in cooperation with the European Centre for communicable disease prevention and control (ECDC) and the European Food Safety Agency (EFSA), and often involving other international organisations as well.

As regards Communication, on the public health side a specific network of Member State communicators has been set up, to ensure consistency at EU level of the messages delivered to the public. On the animal health side, the motto of the new animal health strategy in the EU is "prevention is better than cure". As a result of this, more specific communication activities have been developed in recent years. One of them is the veterinary week, to be held for the second time in the EU at the end of September 2009. During this veterinary week, a conference is to be organised on the specific issue of influenza at the interface between humans and animals.

Discussion

Dr Yehia stressed that intersectoral collaboration is essential, notably between the Public health and the Agricultural sector to build adapted strategy according to each specific national and/or regional context. The importance of preparedness is crucial to be able to implement rapid and efficient responses.

Dr Khoury mentioned that a lot of efforts have been made by International Organisations and donors for improving laboratory capacities in the Middle East by providing equipment and training people. But they can not support for ever, and countries need to participate.

Concerning laboratories, Dr Primot explained that the OIE has a specific programme, the Laboratory Twinning, to enhance capacities and capabilities of laboratories by establishing close collaboration between an OIE Reference Laboratory and a Candidate Laboratory. This programme is financed by the World Fund for Animal Health, managed by the OIE. Such partnership has already been approved for Avian Influenza between a regional laboratory in Cairo, Egypt, and the Friedrich Loeffler Institute in Germany.

Dr Tonglet stressed that the mandate of OCHA is to response to situations where the livelihood of population is at risk. He explained that the coordination system is based on each UN national representative with coordination at regional level. Regionally OCHA collaborates with the Arab League, the GCC, WHO-EMRO, UNICEF and FAO, and he underlined the crucial importance of working at regional level, implementing regional synergies.

Dr Seimenis mentioned that in the region mentalities, tradition and misunderstanding could put a brake to the implementation of efficient IC. MZCP has several programmes on the pipeline but actually can not set up them, lacking on human and financial resources.

Dr Economides highlighted the importance to give adequate information to politicians and decision makers, in their own language using economic, financial and social data.

Dr Brouw informed the audience on specific partnerships developed by the European Union to support regional projects, notably in Asia and Africa. This programme is motivated to assist neighbouring region to fight against disease as a protective measure for Europe.

Dr Yehia mentioned that IC within European State is a good model to follow, notably considering its harmonized legislation. Dr Brouw clarified the legislation system of the EU and explained that it is a good model for cooperation and a good way to improve VS, but it takes a huge amount of time.

Session 4: Intersectoral collaboration: countries' situation

Situation in the Republic of Cyprus

Dr Eleni Veligratli, Animal Health and Welfare Division, Veterinary Services, Cyprus

Avian Influenza is probably the most important zoonoses nations had to deal with during the last years. Experience has shown that only prevention and collaboration are effective against the disease. With that in mind the European Union, of which the Republic of Cyprus is a member, has decided on specific rules for the surveillance, the prevention of introduction and spread into the country of the disease and for the control in case of an outbreak.

The Republic of Cyprus stands in the crossroad of migratory routes of wild birds, identified as one of the main source of the introduction of the disease in the country. However, not many birds land on the island due to the drought observed during the last years. The Veterinary Services of the Republic of Cyprus apply a surveillance programme since 2005, which includes sampling of all poultry farms (except broiler farms), wild birds from areas characterized as high risk and backyard birds. Blood and tissue samples are examined in the Virology Laboratory of the Veterinary Services with either HI test or Virus Isolation and PCR tests, respectively. No H5 serotypes have been isolated until today. In August 2006, H1N1 was detected in wild ducks from a lake in Nicosia, which died from botulism due to the drought and the decline of the water level of the lake. For the implementation of the surveillance programme the Veterinary Services collaborate with the Game Fund, for the capture of wild birds and the Ministry of Health, for the vaccination with the seasonal flu vaccine of Veterinary staff involved in the surveillance.

Moreover, the Veterinary Services have prepared a Contingency plan for the combat of AI, which provides that in the event of an outbreak the Veterinary Services will seek the assistance of other public services, local authorities and relevant organizations. Public Services involved are the Ministry of Health, the Police, the Game Fund, the Fire Brigade, the Department of Meteorology, the Department of Agriculture, the Civil Defence, the Environmental Services and the Forestry Department, each of which is appointed a specific role in the plan to combat the disease. In addition, local authorities and organizations, such as hunting organizations, poultry farmers' organization and Veterinary Practitioners organization are to be contacted to assist in informing the local community and in the surveillance for possible additional outbreaks.

As no AI case occurred in the Republic of Cyprus, intersectoral collaboration was put to test in a simulation exercise performed between the 9th and the 12th of October 2006. Collaboration with other services proved to be good and areas of need of improvement were identified.

Situation in Egypt

Dr Saber Abdel Aziz Galal, G^{al} Director of Poultry Diseases Department, G^{al} Organisation for Veterinary Services, Cairo, Egypt

Poultry population in Egypt was severely affected by Avian Flu, the production before 2006 was nearly 1.8 billion birds per year.

Poultry population in Egypt in 2009 will be between 1.2 to 1.5 billion birds per year, after four years of the infection.

Avian flu announced in Egypt the 17 February 2006, 1076 foci were reported affecting 845 farms. In 2007, only 284 foci in 35 farms were notified and in 2008, which was the least year of infection, only 127 foci on 27 farms were observed.

In 2009 and due to the drastic actions which are taking nowadays in Egypt we discovered 112 foci on 19 farms.

All poultry farms, animals, agriculture and human live on 5% of the Egyptian land, because the other 95% are desert where no life is at all.

The preparedness plan for combating Avian Influenza was prepared before 2006 and it depends on:

- Active Surveillance;
- Movement Control;
- Culling and hygienic disposal of carcasses;
- Biosecurity measures;
- Vaccination and exist strategy;
- Restructuring and upgrading of poultry production;
- Training;
- Compensation.

Specific Avian Influenza working groups have been constituted to follow the implementation of the Plan.

The particularities of poultry cultural production in Egypt regarding the handling of live poultry (extensive backyard and roof top birds in rural and urban areas) and the practice of slaughtering the birds at home is a main constraint to control efficiently this diseases (the capacity of slaughter houses cover only 50% of the Egyptian production).

Vaccination is an important tool implemented by Veterinary Services with the support of the OIE, AU-IBAR and France, but sustainable funding is lacking for backyard poultries.

Situation in Iran

Dr Mohammad Taher Parsafar, Head of Poultry Diseases Control Department, IVO
Kordestan Province, Iran

In the year 2005 an Avian Influenza Committee was established and is composed from the Minister of Interior, the Minister of Health, the Minister of Jehade-Agriculture, the Iran Police (NAJA), the Minister of Transportation, the Department of Environment, the National Centre for the Management of Crisis.

This Committee is chaired by the Governmental Deputy President and managed by the Iran Veterinary Organization (IVO).

All the 31 provinces of the country are integrated in this Committee.

In 2005, due to the occurrence of Highly Pathogenic Avian Influenza (HPAI) in Turkey and Iraq, IVO decided to implement a buffer zone, starting at both borders with a length of 10 km inside the country.

In this buffer zone, all the rural poultries have been culled and destroyed. Compensation was given to all the owners by the IVO.

According to OIE and FAO guidelines, active and passive surveillances are in place for domestic poultry and only passive surveillance for wild birds.

Randomized sampling is conducted in 100 villages in each province, each year since 2008, according to OIE and FAO relevant guidelines.

Training courses are also conducted on Avian Influenza (AI) epidemiology and diagnosis in the framework of a FAO project.

All the 31 Iran provinces have a provincial laboratory but 9 of them are well equipped with PCR machines and are able to perform AI molecular diagnosis regularly.

Awareness programmes, through media, brochures or pamphlets are conducted by the IVO to inform specifically the public, poultries owners and/or breeders.

A national plan is in place and regularly updated by the IVO with all the concerned local institutions and partners.

Situation in KSA

Dr Faysal Bayoumi, Director Animal Health Branch, KSA

In February 2007, the Kingdom of Saudi Arabia (KSA) reported its first incidence (outbreak) of Highly Pathogenic Avian Influenza (HPAI) to the OIE.

However, Low Pathogenic Avian Influenza (LPAI), H9N2 was recognized in chicken and reported to OIE in 2001.

Since then, the government encourages poultry producers to raise poultry in modern closed poultry houses under strict bio- security precaution with the result that reported cases of low pathogenic avian influenza are now rare.

A total of 19 farms were identified as infected (3 breeder farms, 15 layer farms and one Ostrich farm) located in four governorates in Riyadh province (Al Kharj, Thadeq, Mezahmyia and Dherma).

During the course of the outbreak a total of 6.492.120 birds were either died or culled in 19 infected farms, 8 non infected farms, live bird markets and backyard poultry.

Collaboration has been implemented between the Ministry of Agriculture, the Ministry of Municipal and Rural Affairs, the Ministry of Health, the Ministry of Interior, the Road security (highway patrols) and the Civil defense, with specific attributions for each of them.

KSA has conducted many simulation exercises before and after onset of HPAI outbreak. These simulation exercises increase cooperation between different governmental sectors collaborated in the Disease Control.

But, continuous updating and refinements are needed to address the findings of these exercises and the situation on the ground.

Situation in Kuwait

Dr Sanaa Al-Rashid, Mentor of Veterinary Laboratory – PAAF – Kuwait

Since October 2006, the State of Kuwait has prepared itself to face the risk of Avian Influenza. As part of contingency planning for an Avian Influenza outbreak, the need to unite the national efforts has arisen.

All of these efforts from different sectors in the country work under one umbrella that is the Avian Influenza Supreme Conjoint Committee.

The Public authority of Agriculture Affairs & Fish Resources (PAAF), the Ministry of Internal Affairs, the Ministry of Health, the Public Authority of Environment and the Ministry of Communication are involved in this Committee with specific attributions.

In February 2007, the Avian Influenza outbreak put this Committee in live experience that lead to re-planning its strategy.

Declaring the State of Kuwait free of Highly Pathogenic Avian Influenza in 2007 was the most distinguished achievement of this committee.

The main difficulties faced concern, in such cases the lack of experience, the comprehension of the preparedness plan by stakeholders and mechanism of information exchange between the different parties.

The main lessons learned concerned mainly the improvement of biosecurity to ensure good hygiene practices are in place so that the risk of a disease occurring or spreading is minimized and education and information of people are essential.

Situation in Lebanon

Eng. Abeer Sirawan, Directorate of Animal Resources, Ministry of Agriculture, Lebanon

With respect to Lebanon, any case of H5N1 neither in domesticated poultry nor in wild or migrating birds have been observed in our country.

The intersectoral collaboration in Lebanon was implemented through the committees established by ministerial decrees. It was established especially between the Ministry of Agriculture, the Ministry of Public Health and the Ministry of Interior.

The other concerned authorities are the Ministry of Environment, the Ministry of Energy and Water Resources, the Ministry of Finance, the Ministry of Social Affairs, the Ministry of Information, the High Relief Committee, the veterinary statutory body, migratory birds associations and the poultry syndicate.

Through meetings and Ministerial decrees, the concerned authorities have specified the responsibility of each authority on an outbreak site.

We had an H7 suspicion case which was as a simulation exercise in action.

The main difficulties we experienced are the political situation, conflict of responsibilities, shortage of Funds and the inability to implement the desk top simulation exercise we have prepared.

The results of such collaboration were the exchange of information concerning diseases and their prevention and control, results and evaluation of the intersectoral sectors work.

With respect to progress that should be implemented, it is the continuity in disease prevention and control through the intersectoral collaboration with the concerned authorities.

In conclusion, intersectoral collaboration is essential to achieve the goal of diseases prevention and control both for human and animal health.

Discussion

Dr Eleni Veligratli exposed that in Cyprus the mobilization of workers from other ministries or institutions in case of HPAI emergency could be an important constraint according to some will be reluctant to work in infected premises.

Dr Yehia stressed that both KSA and Kuwait experienced H5N1 HPAI outbreaks in 2007 and they both eliminated quickly the disease by well structured IC. Their respective experience shall serve as model for other regional countries.

Session 5: Practical session and forum of discussion

Simulation Exercises

Prof. Hassan Aidaros, Professor in Veterinary Hygiene Medicine, Cairo, Egypt

(the presentation was made by Dr Ghazi Yehia, due to the inability of Dr Aidaros to participate to the meeting)

Intersectoral collaboration means harmonized and integrated activities between the relevant sectors to address multi-factorial issues/problems. It should be established and strengthened in order to avoid duplication of activities and confliction, to achieve the goals with the fastest, easiest and cost effective ways and to improve the planning of the disease control programs.

In such frame simulation exercises are the best mean to test efficiently planned actions for control a disease or risk.

Simulation exercises need good preparations between all sectors to run the scenarios in a smooth way under real field conditions. And the scenarios should be prepared to test all the possible events.

Different concepts of simulation exercises could be used according to objectives previously identified:

- Simulation drills are focused on specific part of the plan, to test an operation or action in the field;
- Table top exercises are more interactive learning exercises. They provide a facilitated analysis of a simulated emergency situation, based on existing operational plans in an informal and stress-free environment and designed to elicit constructive discussion on difficulties and problem solving;
- Full scale exercises mobilize several components of the plan simultaneously, simulating a real event as closely as possible by including a field component. They serve to evaluate entire plan.

There is a big challenge between scientific standards and field realities and not all the science based standards are applicable under field conditions.

In summary, simulation exercises are a key tool to address these challenges.

Regional support needed to progress in intersectoral collaboration for disease control

The session started with comments on the presentation made by Dr Yehia on simulation exercises.

Dr El Idrissi stressed the importance of Table Top simulation exercises and explained that FAO has developed a specific framework on this subject. Several workshops and exercises have been already organized in Eastern Europe and Central Asia and FAO could support and assist countries of the Middle East in such a matter.

Dr Yehia mentioned that several countries of the region have already done simulation exercises or have experienced the disease, testing their action plan. Nevertheless the process need continuous updates and strengthening of collaboration and partnerships established with other sectors. He stressed also countries to set up same plans and IC for other infectious diseases.

Dr Khoury explained also that some countries are afraid to implement full scale simulation exercises because it could have a negative impact on the public society.

Dr Ali mentioned the necessity to have in place good awareness programmes before setting up such exercises.

Dr Glynn clarified also that AI preparedness plan may not adequately cover all issues relevant to preparedness for other animal influenza. Surveillance is always an important component, but it is necessary to carefully design the surveillance program, according to international standards and guidelines, and to determine in advance what to do with the results. She stressed also that collaboration with other sectors should also be established in such case.

Concerning surveillance of influenza viruses in swine population, Dr Glynn advocated again to well read all the statement made by the OIE on this issue.

Then, discussions were mainly focused on communication and awareness.

All participants fully stressed the crucial importance of information, communication and awareness programmes, which are an important issue in the region and need to be well organized.

Important lack and gaps on VS communication strategies, notably with stakeholders, have been quoted by all countries representative.

The education of professionals was also highlighted as a key point to be improved within the Middle East area.

Participants proposed that International Organisations should promote communication programmes/assistance to countries and regional cooperation through harmonized strategies.

These strategies should be conducted by the OIE-FAO RAHC and should also take into account specificities of regional clusters (Gulf countries...), sharing epidemiological, social and cultural specificities.

It was also highly advocated to favour access and continuous consultation of technical website, regularly updated, such as the OIE, FAO and OFFLU websites.

The designation of a focal point on communication within each VS has also been mentioned.

Participants have also agreed on the importance to prepare collaboration programmes during "peace time", to consolidate and improve actions already implemented and to regularly evaluate them, by internal or external ways.

To conclude this session, Dr Yehia reminded the audience that the OIE Communication Unit in collaboration with the OIE Regional Representation for the Middle East will organize in Oman in April 2010 a workshop on communication.

Conclusions

Collaboration programmes on avian influenza crisis management with different partners from different sectors are in place in all countries and Veterinary Services usually lead the technical aspects.

The quick elimination, in some countries of the region, of H5N1 HPAI after its occurrence is a good indicator of the level of the intersectoral collaboration these countries have developed.

Nevertheless a lot of improvements need to be set up in order to well face the challenges the region is facing, to manage and control animal disease not only those with the potential to cause epidemics and pandemics, but also those having an impact on food security and livelihood.

Communication and awareness programmes have been recognized as an important and critical task for Veterinary Services in a world where information is largely broadcasted through mass media and internet without any control.

It appears also that the access to the scientific and technical information through OIE, FAO and OFFLU websites is very low, due to the ignorance of the availability of such information.

Recommendations

AVIAN INFLUENZA: INTERSECTORAL COLLABORATION
Larnaca - Cyprus
20 – 22 July 2009

CONSIDERING THAT

1. Even if HPAI has been eliminated in poultry in most countries in the world where it had appeared, it remains entrenched in a few countries, which continue to put their neighbours and the whole planet at risk;
2. H5N1 HPAI remains a threat of high concern for all Middle Eastern countries considering that the virus has become endemic in one country of the area (Egypt);
3. All national authorities in the Middle East have developed national strategies to control HPAI and several countries have already quickly eliminated the disease in poultry when it occurred;
4. To ensure the eradication of the disease in poultry, good governance of veterinary services and compliance of veterinary services with relevant OIE standards are a priority in order to implement adapted early detection and rapid response mechanisms, and transparent system for diagnostic laboratory confirmation and notification;
5. Compensation mechanisms are crucial to encourage transparency, reporting and biosecurity measures, and reflect good governance on part of the public and private sectors;
6. Significant efforts are still needed to improve sustainable biosecurity, and this requires a multi-sectoral approach that is implemented throughout the poultry chain with active collaboration between public and private entities, and the engagement of animal health, production, communication and socioeconomic specialists;
7. No success can be achieved without the collaboration of all sectors involved;
8. The action plan adopted during the 4th Regional Steering Committee of the GF-TADs for the Middle East and the mandate given to the OIE – FAO Regional Animal Health Centre to implement it.

The participants of the meeting recommend:

1. To promote and strengthen in all Middle Eastern countries ongoing collaboration for healthy poultry production, safe trade, and decreased risk of zoonotic diseases at the human-animal interface through the collaboration between concerned institutions (e.g. joint working group, technical exchange of scientific information, national coordination of sectors, networks...) and identify novel areas for additional technical collaboration;
2. To develop, at regional and country level, continuous strategic collaboration and partnerships across various sectors for the effective prevention and control of HPAI and other emerging infectious diseases;
3. To expand in all Middle Eastern countries partnerships with the private sector, improving capacity where necessary to ensure adequate influenza surveillance;
4. To reinforce Veterinary Services in all Middle Eastern countries through OIE PVS evaluation and its complementary processes: the PVS Gap Analysis in collaboration with FAO and donors, OIE PVS Follow Up and Legislation;
5. To perform, at country level, human resources development activities and skills improvement in order to consolidate collaboration and cooperation between all relevant sectors;
6. To strengthen and improve existing mechanisms and systems for information collection, sharing, and analysis maintained by OIE, FAO (including OFFLU) and with WHO (such as GLEWS) in order to facilitate and promote interagency collaboration wherever possible and enhanced preparedness by countries and commercial partners;
7. To continue the support of the "One World – One Health" concept advocated by FAO, OIE, WHO, UNICEF, UNSIC, the World Bank and other partners, in order to better understand the causes of the emergence and spread of infectious diseases of animal origin, not only those with the potential to cause epidemics and pandemics, but also those having an impact on food security and livelihood;
8. To organise more simulation exercises to bring different sectors together and to develop good practices for the implementation of contingency plans;
9. That the OIE/FAO Regional Animal Health Centre, under the umbrella of the FAO-OIE GF-TADs mechanism, supports countries to implement the recommendations above when needed.

Agenda

AVIAN INFLUENZA: INTERSECTORAL COLLABORATION
Larnaca - Cyprus
20 – 22 July 2009

AGENDA

MONDAY 20 JULY

08:30 – 9:00	Registration
9:00 - 10:00	Welcome address by: <ul style="list-style-type: none"> - Representative of the Cypriot authorities (Public Health – Agriculture) - FAO Representative - OIE Representative - WHO/MZCC representative
10:00-10:30	Coffee break
Session 1: Influenza viruses – Current situation Chairman: Dr Charalombos Kakoyianis (CVO Cyprus)	
10:30 -11:30	Influenza viruses – a review (Dr Kate Glynn, OIE)
11:30 – 12:00	Avian Influenza worldwide situation (Dr Ghazi Yehia, OIE-ME)
12:00 – 12:45	Influenza – OIE standards (Dr Kate Glynn, OIE) Communication on the Pandemic Influenza A (H1N1) 2009
12:45 – 14:00	Lunch
Session 2: Intersectoral collaboration – Key points Chairman: Dr Ali Al Sahmi (Vice president OIE Regional Commission)	
14:00 – 14:30	Intersectoral collaboration – preparedness programs and emergency response (Dr Pavlos Economides – Expert Cyprus)
14:30 – 15:00	Intersectoral collaboration – communication activities (Dr Pierre Primot – OIE-ME)

Session 3: Intersectoral collaboration – At global and regional level	
Chairman: Dr Pavlos Economides (Expert – Cyprus)	
15:00 – 15: 20	Intersectoral Collaboration in the Middle East (Dr George Khoury, FAO)
15:20 – 15:40	Integrative approach of influenza epidemiology (Prof. Yiannis Tselentis, WHO collaborating Centre – Greece)
15:40-16:10	Tea break
16:10 – 16:30	One World, One Health (OWOH) Concept (Dr Kate Glynn, OIE)
16:30 - 16:50	The FAO Global Programme for Prevention and Control of HPAI: Fostering intersectoral coordination (Dr Ahmed El Idrissi, FAO)
16:50 – 17:10	Intersectoral collaboration as basic element for effective zoonoses control: the avian influenza issue (Dr Aristarchos Seiminis - WHO/MZCC)
17:10 – 17:30	Humanitarian Assistance System of the United Nations and its Application in an Influenza Pandemic (Jean Luc Tonglet, UN-OCHA)
17:30 – 18:00	An example of intersectoral collaboration: the EU Model (Dr Aart Brouw, EC)
20:00	Dinner offered by the Ministry of Agriculture - Cyprus

TUESDAY 21 JULY

Session 4: Intersectoral collaboration – Countries' situation	
Chairman: Dr Aristarchos Seiminis	
09:00 – 10:30	Selected countries' presentation (15 minutes each): Egypt – KSA – Kuwait – Lebanon – Iran - Cyprus
10:30-11:00	Coffee break
Session 5: Practical session and forum of discussion	
Chairman: Dr Ahmed El Idrissi	
11:00 – 11:30	Simulation exercises (Dr Aidaros)

11:30-13:30	Regional support needed to progress in intersectoral collaboration for disease control (Dr Yehia – Dr Khoury) <ul style="list-style-type: none"> - the role of International organisations in enhancing intersectoral collaboration - the existent legislations and their compliance with international standards - improvement of communication with the Public Health authorities - Collaboration with concerned stakeholders - Implementation of simulation exercises
13:30 – 15:00	Lunch
Session 6: Conclusions and recommendations	
Co-chairs: Dr George Khoury – Dr Ghazi Yehia	
15:00-16:00	Conclusions
16:00-16:30	Tea Break
16:30 – 17:00	Presentation of recommendations, discussion and agreement
17:00 – 17:30	Closing ceremony
20:00	Dinner offered by FAO

WEDNESDAY 22 JULY

	Field visit to Larnaca, Nicosia and Limassol Lunch offered by PanCypriot Company Dinner offered by the OIE Regional Representation
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Opening speeches

Dr Charambolos Kokayianis, CVO and OIE Delegate, Cyprus

Dear friends/guests,

On behalf of the Minister of Agriculture, Natural Resources and Environment of the Republic of Cyprus, who was unfortunately not able to attend this Conference on Avian Influenza, I would like to welcome you all to Cyprus.

We consider such international meetings very important for the coordination of efforts and actions in the region and internationally to prevent the introduction and spread of this disease.

Avian Influenza is a highly contagious disease of avian species and since the beginning of the outbreak of Avian Influenza in Asia at the end of 2003, outbreaks of the disease were confirmed in wild birds and poultry farms in many Asian, African and European countries.

The spread of the disease was addressed at different levels and platforms and a number of efforts were undertaken at regional, national and international level to identify ways to prevent, control or eradicate the disease. Whichever the actions proposed were, one thing was evident: **no success could be achieved without the collaboration of all sectors involved.**

As of 2005, the Veterinary Services of the Ministry of Agriculture, Natural Resources and Environment of the Republic of Cyprus apply a surveillance program for Avian influenza in poultry and wild birds and has prepared an Avian Influenza Contingency Plan to combat any possible Avian Influenza outbreak. At the same time the Ministry of Health of the Republic of Cyprus has prepared a Human Influenza Preparedness Plan. As the disease poses a serious threat to animal and human health, both Ministries work in close cooperation and their contingency plans provide for the exchange of information and expertise amongst them, as well as a close cooperation and actions in the event of an outbreak.

We were fortunate that up to today we did not have an outbreak of the disease. But no matter how optimistic we might be, the possibility of an Avian Influenza outbreak cannot be excluded. For that, it is of outmost importance that all services involved continue to work closely to prevent such an outbreak from occurring or in case that proves not possible to effectively undertake all necessary actions for an immediate resolution of the case.

We are confident that this international conference will achieve OIE's objectives of promoting transparency and strengthening international coordination and cooperation and will further reinforce the efforts to prevent the spread of the disease and combat existing and possible new outbreaks worldwide and in the region.

The Ministry of Agriculture, Natural Resources and Environment of the Republic of Cyprus welcomes any recommendation for improving intersectoral collaboration and coordination to cope with Avian Influenza threat. We thank you for choosing Cyprus as the host country for this conference and we wish you a pleasant stay and every success in achieving the aims of the conference.

Dr George Khoury, Coordinator FAO-ECTAD Middle East, Beirut

Intersectoral Collaboration demonstrated itself as a need and a very important tool for the prevention and control of infectious animal diseases especially after the evolution of High Pathogenic Avian Influenza

That is because HPAI proved itself as a communal problem, and every partner can benefit from this collaboration, these benefits could not be realized without collaboration, because the synergy achieved through collaboration can create a tremendous power enable the community to prevent and control HPAI.

That is why International Organization have made considerable efforts to enhance this collaboration,

FAO played a very important role in these efforts in the Middle East region through funding and implementing many technical assistance projects ,capacity building , conferences , training , preparing and updating national preparedness and contingency plans , executing simulation exercises , in addition to providing updating information through interagency bodies (GLEWS – EMPRES – OFFLU)

Unfortunately Intersectoral collaboration concept was not very well understood or tolerated in the Middle East before the evolution of HPAI in some countries , but after the year 2006 , we can easily noticed the progress and achievements made in this domain , but we have to confess that still a lot to do to reach the international standards and obligations .

This workshop is another effort of the Regional Animal Health Centre for the Middle East in the way of building reliable and competent system to prevent and control animal diseases in the region.

On behalf of the FAO I can promise that FAO will do whatever possible to assist countries in the region building its capacities and be prepared to face any event.

Finally I wish to express my thanks and gratitude to the Cypriot government for hosting this workshop and the warm welcome. Wishing to your workshop all the success and fruitful outcomes.

Dr Aristarchos Seimenis, Director of the WHO-MZCP, Athens

On behalf of WHO/MZCP and the WHO-Headquarters I would like to express my pleasure to be with you these days and congratulate FAO and OIE for having selected Intersectoral Collaboration as the main subject of this meeting.

We all know that for zoonoses and foodborne diseases of animal origin is difficult to effectively organize their prevention and control. Main actors in this endeavor are public health and animal health sectors. If these two sectors in each country will not understand the crucial importance of horizontal collaboration and coordination, there are no chances for success.

During these days we are given to collect a lot of messages for us all to understand and consolidate that our countries need for their major sectors to join towards the same targets. There are messages need to be transferred in all countries and from theory to pass into practice.

Thank you

Dr. Ghazi Yehia, OIE Regional Representative for the Middle East

H.E the Minister of Agriculture, Natural resources and Environment;

The representatives of International and regional organizations;

The OIE delegates and representative of OIE members;

Dear Colleagues;

I would like to welcome all the delegates and our guests to this meeting which is very appropriate and necessary in the way forward fighting against Avian Influenza under the Umbrella of the OIE/FAO GF-TADs, and also in the framework of ONE WORLD ONE HEALTH vision.

The regional animal health centre established in Beirut and inaugurated last april is mainly aiming to reinforce the means and resources of OIE, FAO and collaborator in the Regional GF-TADs to be able to reach objectives adopted by member countries in the Middle East in their several meetings.

One of these objectives is continuing actions on Avian Influenza preparedness and control, providing technical assistance and expertise to members and reinforcing capacity building in supporting matters.

Our meeting during these days is to tackle one important bullet of preparedness against Avian Influenza which is the Intersectoral Collaboration which means the obligations of each country to set up harmonized and integrated plan of activities between all relevant sectors to address multifunctional issues or problems related to Avian Influenza.

Our agenda is full of items covering the main aspects of this collaboration, to be presented by our colleagues whom we thank for responding to our request to join us in this meeting.

Our thanks go to our Cypriote colleagues for their kindness and acceptance to hold this meeting in this wonderful spot of Cyprus, and for their help and assistance they provide for the preparation of this workshop.

Hope you a fruitful and successful meeting and a pleasant stay in the very lovely country of Cyprus.

Thank you.

List of participants

AVIAN INFLUENZA: INTERSECTORAL COLLABORATION
Hotel Sandy Beach – Larnaca - Cyprus
20 – 22 July 2009

List of Participants

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Influenza web Portals:

OIE - www.oie.int

- Avian Influenza:
http://www.oie.int/eng/info_ev/en_AI_avianinfluenza.htm
- Swine Influenza:
http://www.oie.int/eng/maladies/en_swine_influenza.htm
- Pandemic H1N1 2009:
http://www.oie.int/eng/press/en_press2009.htm?e1d3

OIE RR - www.rr.mideast@oie.int

- Avian Influenza:
<http://www.rr-middleeast.oie.int/viewpage.asp?id=426>
- Avian Influenza (in arabic)
<http://www.rr-middleeast.oie.int/arviewpage.asp?id=313>
- Pandemic H1N1 2009:
<http://www.rr-middleeast.oie.int/viewpage.asp?ID=490>
- Pandemic H1N1 2009 (in arabic):
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- Avian Influenza:
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- Pandemic H1N1 2009:
<http://www.fao.org/AG/AGAInfo/programmes/en/empres/AH1N1/Background.html>

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- Avian Influenza:
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- Pandemic H1N1 2009:
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GLOBAL FRAMEWORK FOR THE
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