



OFFLU Executive Committee discussion with various technical activity leaders

(9, 11 and 30 September by zoom calls)

To follow up on the action points identified in the joint OFFLU Steering and Executive Committee meeting held in April 2020, the OFFLU executive committee held discussion with various technical activity leaders to elaborate the OFFLU work plan. The main objective of this discussion is to concentrate on what the technical activities are going to deliver in the next year instead of over ambitious and to keep the momentum within the network during the current COVID-19 pandemic situation. With this mind, leader of each technical activities was invited to provide an update on what is going on and where each technical activity would like to achieve in the next year.

Avian influenza technical activity:

Dr Frank Wong the co-leader of this activity led the discussion.

H9N2 activity: (Participants: Frank Wong (ACDP, Australia), Isabella Monne, Francesco Bonfante (IZSve, Italy), David Suarez (SEPRL, USA), Nicola Lewis (APHA/RVC, UK)

The low pathogenic avian influenza H9N2 is not reportable to OIE and only a few countries submit data on H9N2 for WHO vaccine composition meetings. In recent years a lot of economic concerns were raised due to H9N2 which have become a wider problem in many countries including Asia, Middle East, Africa and many sub lineages of the virus have emerged posing both animal and public health impact. To address this issue, it was proposed to initiate an OFFLU activity for H9N2. To understand what is happening with regard to H9N2 surveillance, sample submission, diagnosis and research activities in different regions, Dr Wong shared the H9N2 activities in ACDP (Australia) and invited other participating labs including SEPRL (USA), IZSve (Italy) and APHA (UK) to share such information. The experts noted that there was some initial works on the nomenclature of H9N2 viruses, but it needs to be followed up for harmonisation. With regard to vaccination, several vaccines are currently being used for H9N2 which are not efficient to give full protection for circulating viruses and so the countries are looking for assistance in this regard for a better approach. The experts agreed on the below points to pursue collectively and collaborate to address the priority topics (to be led by IZSve).

- Harmonize the phylogeny-based classification of H9 viruses and adopt an unambiguous and common lineage nomenclature.
- Broadening the antigenic characterisation activities focussing on circulating H9N2 viruses. Participate in the production of specific antisera for H9N2. Mapping of H9N2 viruses by ferret or avian antisera panel, phylogenetic and antigenic data on current circulating H9N2 viruses in affected regions of the world and sharing this information with countries (all participating labs).
- Promoting sample collection and surveillance for H9N2 in countries and assessment of capacity and efficacy for H9N2 diagnosis and support in filling in the gaps.

Proficiency testing (PT):

Australia Centre for Disease Preparedness (ACDP) formerly AAHL, Australia has been coordinating the OFFLU PT among the OIE/FAO Reference Centres for the last few years. The Committee members thanked the ACDP, Australia efforts in coordinating and leading this activity. It was noted that the last two rounds of PT showed that many labs have unacceptable results for a variety of samples and concerns were raised by the parent organisations on the results and what steps were taken for an active follow up in this regard apart from recommendation to review procedures that may not be enough for any OIE Ref Lab that is repeatedly year-on-year providing poor performance.

The experts discussed on the utility of the OFFLU PT, its limitations and how the result could be better interpreted for any active follow up. The committee recognised that the OFFLU PT was designed to be challenging to assess the capability of the laboratories to detect and characterise isolates of avian influenza from different regions covering the multiple diversified avian influenza virus lineages with significant and less significant virus samples. The current PT objective is to help labs to broaden their diagnostic capacity, preparedness and self-improvement, recognizing the typical geographic limitations of circulation, and the gaps that may exist when only targeting those expected to be in samples received by any individual lab. Consequently, there will be viruses that one would expect all participants to score well on, but others may be less critical. As such, the unacceptable results in the PT summary tables should be interpreted with a nuanced appreciation of the underlying sample detail, as a blanket interpretation could be misleading. For example H5 PCR assays used by some reference labs in the PT testing, may be designed to detect currently relevant circulating HPAI viruses (e.g. gs/GD lineage H5) and never intended for other regionally circulating viruses (e.g. broader Eurasian, North American or Oceania lineages). One query raised was whether the OFFLU PT should narrow its focus to only the known dominant zoonotic AI subtype lineages (predominantly Asian lineages), and whether this focus will compromise attention to other LP/HP AIV lineages that remain relevant to disease in poultry or circulation in wild birds.

As a way forward, the Committee will rethink the objectives of the PT based on the lessons learned and how the results could be better interpreted. For future PT results analysis, it was proposed to constitute a small group of experts with external quality assessment experience to suggest relevant strains for consideration every 12 months and to review outcomes of PT performance by ref labs. This group will factor relevance and decide on minimum requirements at a global scale for what panel of samples members should have acceptable result. This expert interpretation summary of the PT results from each round could be included as an Annex in the ACDP PT report, or as a separate OFFU summary.

OFFLU wildlife update (Participants: Ian Brown, Billy Karesh, Andrew Breed, Mia Torchetti, Nicola Lewis)

Dr Andrew Breed (Australia) the leader of this activity informed the Committee that his commitment with Covid-19 tasks was now over and keen to resume and lead the wildlife activities. The Committee observed that the membership of this activity was created several years ago, and many members were absent and not contributing regularly. In view of this it was recommended to refresh the membership of the group with active experts and maintaining the global coverage to involve experts from all regions. The key outputs of the decision were:

- Identify the key core experts who are still involved and working in the AI wild bird surveillance to have a global coverage (Andrew Breed and Secretariat).
- The activity to focus on having regular calls with experts of different regions to provide situation updates of wild bird avian influenza outbreaks (Secretariat).

- Conducting a survey for collection of information on ongoing wild bird surveillance, and to identify gaps from different regions (Andrew Breed and Secretariat).
- Draft an OFFLU position piece on gaps in wild bird surveillance and immediate priorities (Andrew Breed with inputs from experts and Secretariat).

OFFLU socio-economic update:

Dr Jonathan Ruston, University of Liverpool, UK who is the leader of this activity provided an update and future work plan. The Global Burden of Animal Diseases (GBADs) has been initiated to collect background information on the loss in production due to livestock diseases, animal welfare and health issues in order to support evidence-based decision-making. Influenza is one of the diseases that will be targeted in the plans of the GBADs and it will be looking into the disease impact on different species. Considering this, the aim of this OFFLU socio-economic activity is to link the OFFLU network with GBADs programme on influenza issues and collect domestic production, expenditure parts like vaccination and surveillance. Try to highlight which parts of the world there are risks of emergence of animal influenza viruses into the human populations and try to detail what we are doing about the influenza viruses that are circulating in the livestock populations from the animal health perspective in terms of budget and activities and whether it is adequate in terms of reducing the risk of emergence of pathogens for pandemic preparedness.

Action:

- Revise the OFFLU concept note and membership of the socio-economic activity to align with the objective of the GBAD (Jonathan).
- Access of the data on market systems, food systems through OFFLU mechanism (with participation of OIE and FAO regional offices)
- Raising awareness in social and economic science due to impacts of influenza
- Understanding the drivers and measures to control influenza in a better way

OFFLU epidemiology update:

Dr Dirk Pfeiffer informed that the technical experts of this activity were consulted on various occasions to provide advice and guidance on documents related to AI risk assessment and management. The documents reviewed and updated by the experts include the Chinese-Origin H7N9 Avian Influenza Spread in Poultry and Human Exposure and H5N8 HPAI assessment for Southern Africa. The experts will continue to provide advice on AI risk assessment documents and also interact with other technical activities which will include:

- Interaction with the avian influenza technical activity for H9N2
- Providing an epidemiological perspective for the OFFLU-WHO VCM epidemiological data report
- Interaction with the wildlife technical group for the epidemiological predictions of transmission link between wild birds and domestic birds on global/regional events based on scientific information available

OFFLU equine influenza update:

Dr Ann Cullinane provided an update. The equine influenza activities are mostly narrowed to H3N8 subtype viruses and detailed investigation on these viruses have not yielded a significant potential zoonotic threat, no evidence of reassortment with other viruses and infecting humans so far. So, the focus of the activity is mostly on the equine industry. Equine influenza is primarily controlled by vaccination and so there is focus on investigation of vaccination regimes, efficacy of vaccines and

whether vaccines need updating. The recent activities of the technical activity included publication on the optimization of vaccination regimes prior to movement of horses, harmonised PCR test which is type A influenza test to detect other influenza viruses, standardisation of reference antiserum against the clade 2 viruses and the generation of specific ferret and equine antisera. The group is very active in surveillance for equine influenza viruses, sharing the data within the network, generation and sharing of reagents and distribution of panels for proficiency testing all over the world. Also, at the most recent meeting of the OIE Expert Surveillance Panel for equine influenza there was more participation of experts from Africa and sharing of data with the group activities. One of the challenges the group is now facing is that two of the OIE reference laboratories for equine influenza no longer have that status due to accreditation or other issues. Dr Cullinane asked for assistance in generation of ferret antisera against equine influenza viruses. Dr Torchetti the Chair of the EC referred this request to the Avian influenza technical activity to assist in the preparation of avian-mammalian ferret antisera.

The main action points for the next year include:

- Continuing with the expert surveillance panel activities for update of vaccine recommendations for equine influenza
- To compensate the loss of assistance provided by two EI reference labs, USA, UK and Australia avian influenza labs will be approached for generation of ferret antisera for Equine influenza activities against the most recent virus.
- Collaborating with the socio-economic activity to provide information on the impact of 2018-2019 equine influenza outbreaks. Ann Cullinane to liaise with Cristian and Jonathan.

OFFLU swine influenza update:

Dr Taki Saito (Japan) and Dr Gaëlle Simon (France) (leader and co-leader of the SIV group, respectively) informed that the OFFLU SIV group was initially expecting to have a side meeting at the International Pig Veterinary Society (IPVS) congress in Brazil in June 2020. Due to the COVID-19 crisis, this meeting did not take place and exchanges were more limited this year by email. However, the technical experts were consulted on number of occasions to provide SIV data for WHO VCM purposes and also to prepare the OIE/FAO/WHO tripartite statement on circulation of A(H1N1) subtype influenza viruses in the swine population in China with evidence of zoonotic potential and pandemic risk associated with swine influenza viruses.

The main action points for follow up:

- Convene a virtual meeting of the OFFLU swine expert group with a session to update current activities and another session to draw up work plan for next year (Secretariat).

Training materials:

The Committee felt the need to evaluate the documents on training materials posted on the OFFLU website for necessary updates with new information.

Action: Experts will be contacted for update of training materials on the website (Cristian, Secretariat)