OFFLU Applied Epidemiology Technical Working Group meeting

(28 – 30 June 2017, FAO Headquarters, Rome)

OFFLU organised a technical meeting by inviting a group of experts to finalise the Terms of Reference for the Applied Epidemiology Technical Working Group and to develop specific work plans for the Group's activities.

Terms of Reference:

Background

At the OFFLU Executive Committee meeting held in April 2014, it was agreed that "epidemiology technical activities focusing on the broad topic of surveillance seem to be warranted as long as a concrete objective was identified". As per OFFLU modus operandi, a technical activity is defined as group of experts collaborating to address specific activities.

Purpose / role of the Technical Working Group

The purpose of the OFFLU Applied Epidemiology Technical Working Group (AETWG) is to provide guidance and advice to stakeholders at sub-national, national, regional and global level in relation to avian influenza (AI) risk assessment and management.

The scientific aims of the OFFLU AETWG are to contribute to the:

1. Identification of the pathways leading to the introduction, spread and maintenance of relevant avian influenza viruses in different eco-social system settings and estimate the risks associated with these pathways, within the context of structured risk assessments
2. Development of appropriate risk management options for relevant avian influenza viruses in different eco-social system settings, including the design of surveillance systems and their components

The OFFLU AETWG's role in relation to these aims will be mainly advisory, interlinking with other OFFLU Technical Working Group activities, and it may occasionally involve conducting specific projects.

Membership

Membership of the OFFLU AETWG is based on technical expertise and knowledge about AI in relevant eco-social system contexts. There will be a maximum of 10 to 12 members.

The Chair of the Technical Working Group is appointed by the OFFLU Executive Committee for a period of 3 years and can be extended for further three years.

The members of the Working Group are selected by OFFLU Executive Committee together with the Chair. Membership of the Technical Working Group is for a period of 3 years, and it can be extended for another 3 years.

Accountability

The Technical Working Group is responsible to the OFFLU Executive Committee.

Review

The Terms of Reference will be reviewed as and when needed.

Working methods

The activities of the OFFLU AETWG will be operated through face-to-face meetings or by tele-conferencing or email communications.

The Technical Working Group's work will be initiated by the OFFLU Steering Committee, OFFLU Executive Committee or as a self-mandate.

When appropriate, some activities of the AETWG will be delivered by sub-technical activities which may include additional members with relevant expertise. Where the work includes the animal-human interface, representatives from WHO, or suitably qualified public health scientists shall be included.

Members of the AETWG will make their personal services available for meetings/teleconferences as a *pro bono publico* contribution. The travel costs and living expenses for attendance of face-to-face meetings will have to be borne by the Technical Working Group Members, or from other sources.

The cost of time and other resources associated with the Technical Working Group's activities outside the meetings will not be funded by OFFLU.

Meetings

The OFFLU AETWG will meet at least twice a year through a face-to-face meeting or a tele-conference call. Additional meetings will be held when needed.

The meetings and other activities of the AETWG will be coordinated by the Chair with the support of the OFFLU Secretariat and FAO focal point for this Technical Activity.

Notes from each meeting will be produced by the FAO focal point for this TA and OFFLU Secretariat.

Outputs, data management and coordination

Data gathered, processed and analysed by the OFFLU AETWG as part of OFFLU activities will be made available to countries and the scientific community.

Activities should have defined objectives and measurable outputs with an associated timeframe for delivery.

Outputs may take the form of advice, recommendations, opinion, reports or scientific publications.

The Technical Working Group aims to publish outputs of technical activities in peer-reviewed scientific journals and to present findings at scientific conferences.

The activities of the OFFLU AETWG and other OFFLU Technical Activities will be coordinated to avoid duplication and facilitate synergies. This will also include collaboration and data exchange between the different OFFLU Technical Activities. The OFFLU AETWG and the OFFLU Secretariat will be responsible for the effectiveness of communication with other Working Groups.

Reporting

The summary of the face to face meetings or teleconferences will be finalised then and there and distributed to other OFFLU Technical Activities, OFFLU scientists, the OFFLU Secretariat and, for issues relating to the animal-human interface, WHO. These stakeholders are invited to provide comments and suggestions for current and future activities.

Definition of terms

Frameworks = generic structure outlining inputs, components, outputs as well as their sequence and interrelationships of a process of interest, in this case the pathways and estimation of AI risk

Risk assessment = estimation of risk (here: probability of animal influenza infection and magnitude of the consequences of such infection) together with identification of risk pathways associated with the risk of animal influenza occurrence;

Risk modelling = identification of risk factors for and estimation of risk of avian influenza occurrence using knowledge- and data-driven approaches, qualitative and quantitative approaches, amongst the latter statistical, probabilistic, spatial and dynamic modelling methods; outputs may form part of risk assessments;

Risk management = process of formulating and implementing measures designed to reduce the likelihood of animal influenza virus entering, spreading or being maintained within a particular eco-social system, and/or the magnitude of its consequences.

General principles of the TA's work

The AETWG will actively promote the need for researchers to aim for meaningful risk assessment and modelling outputs that are useful to policy makers and are accompanied by explicit and understandable descriptions of the quality of data inputs and how they may have affected the outputs in terms of bias and uncertainty. The primary aim should not be to apply the most sophisticated and mathematically elegant data modelling methods to satisfy peer-reviewed research publication and general publicity needs, particularly if based on poor quality data and thereby adversely affecting the efficiency of policy development processes. It is also important for researchers to effectively communicate the uncertainty and biases associated with their outputs to stakeholders involved in policy development.

Tentative work plan for 2017/18

The work plan including prioritisation (low=L; medium=M; high=H) will serve as broad guidance. It will be adjusted and updated over time by the OFFLU AETWG, and it is not expected that all items listed below will be covered.

Risk assessment and modelling

Task	**Priority (L/M/H)**
1) Support, on request, national, subnational, regional and global risk assessments (RA) through the following activities:	
a) Contribute to development of frameworks for estimating risks	H
b) Facilitate/collate case studies of how different RA tools and guidelines have been used in countries	L
2) Use and support further development of the EFSA/FAO FLURISK model	M
3) Review risk assessments produced by FAO, upon request	H

Surveillance

Task	Priority (L/M/H)
1) Contribute to provision of guidance on how to optimise the effectiveness of AI surveillance in domestic poultry in terms of cost and sensitivity (together with OFFLU Socio-Economics TA)	L
2) Support the development of guidance for meaningfully integrating different surveillance data types into a surveillance system, including molecular and wild bird surveillance	M
3) Support the development of minimum data and metadata requirements so that the risk of inappropriate use or interpretation of data is minimised	M
4) Contribute to provision of guidance on wild bird AI surveillance and its integration into AI surveillance systems (in collaboration with OFFLU Wildlife Technical Activity, FAO and OIE)	L
5) Review and update surveillance guidelines produced by OFFLU, OIE and FAO, on request	M

Data management and visual analysis tools

Task	Priority (L/M/H)
1) Advocate for data exchange between WAHIS and EMPRES-i	M
2) Advocate for continued development and maintenance of global databases on livestock population density	M
3) Contribute towards consolidation of existing tools and databases – potentially develop an inventory	L
4) Advocate for user interface designs for visual analysis tools which make them accessible to a wider range of users	L

Data collection

Task	Priority (L/M/H)
1) Develop checklist of data requirements for risk assessment and recommendations for how to collect it and how to optimise data quality	M
2) Produce advice and usage guidance for countries on data collection methods, tools and data quality protocols	M
3) Identify new or currently underutilized data types suitable for epidemiological and molecular analysis (e.g. phylogeography; antigenic cartography) and contribute to development of guidance in relation to data format and standardisation	M
4) Contribute to recommendations for data collection in relation to value chain mapping and analysis (together with OFFLU Socio-Economics Technical Activity)	M
5) Provide, on request, recommendations to international or regional organizations and scientific community on:	
a) Data gaps and investment needs	M
b) Collection and storage of data that is currently not managed in a coordinated way (e.g. results from infection and other biological studies [e.g., receptor binding, pH-dependent fusion activity etc.])	L

Task	Priority (L/M/H)
c) The potential and utility of novel data collection technologies (e.g. social media data, location tracking, mobile phone records)	M

Risk management

Task	Priority (L/M/H)
1) Advocate the need for taking the role of social science (economics, anthropology etc.) into account when it comes to development of effective control and prevention strategies (work with OFFLU Socio-Economics Technical Activity)	H
2) Consider exploring analysis tools such as multi-criteria decision analysis which allow bringing together epidemiological and socio-economic factors into a joint analytical framework for selecting optimal control methods	L
3) Review and evaluate AI control strategies	M
4) Provide recommendations on farm biosecurity risk management	M
5) Provide guidance for conducting outbreak investigations, including data collection	H

Membership

Name	*Skill*	*Country / Organisation*	*E-mail address*
Dirk Pfeiffer (Chair)	Risk assessment; Risk modelling (statistical); Risk management	CityU, Hong Kong; RVC, UK	dirk.pfeiffer@cityu.edu.hk pfeiffer@rvc.ac.uk
Arnaud Bataille	Molecular epidemiology	CIRAD, France	arnaud.bataille@cirad.fr
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