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Transitions from Verona I

Second FAO/OIE/WHO joint technical consultation on influenza and other emerging infectious diseases at the human-animal interface

Verona I

was the first technical consultation organized by the FAO/OIE/WHO and the Istituto Zooprofilattico Sperimentale delle Venezie in search of expert advice in response to the pandemic threat posed by H5N1 and potentially other influenzas
Verona I: Executive summary

- During the consultation: three influenza- specific sessions aimed to identify virological characteristics of AIVs important for zoonotic and pandemic disease, to evaluate the factors affecting evolution and emergence of a pandemic influenza strain and identify existing monitoring systems, and to identify modes of transmission and exposure sources for human zoonotic influenza infection (including discussion of specific exposure risks by affected countries). A final session was held to discuss broadening the use of tools and systems to other emerging zoonotic diseases.

RECOMMENDED SHORT TO MEDIUM TERM ACTIONS

Surveillance and use of data
- Broaden the timely collection of both HPAI and LPAI influenza viruses and associated epidemiological data to ensure that the full scope of hosts, ecologies, and geographic areas are represented (e.g. including environmental monitoring in markets, rice paddies, households, and other areas of increased risk).
- Expand partnerships with the private sector and improve capacity where necessary to ensure adequate influenza surveillance.
- Support research on diagnostic tests for influenza in poultry and humans aimed at improving consistency, sensitivity, rapidity, and cost- effectiveness.
- Use virological surveillance data to inform continual reassessment of diagnostic reagents and vaccines, monitor virus evolution and antiviral resistance, and assess risks of emergence of potential zoonotic and pandemic strains.
RECOMMENDED SHORT TO MEDIUM TERM ACTIONS

Transdisciplinary research on zoonotic risk

- Increase and improve data on zoonotic influenza in humans through standardized data collection, and additional case control and serological studies in the field.
- Develop tools and conduct integrated analysis of zoonotic risks from animal influenza viruses, and translate technical knowledge gained into practical strategies and recommendations at the interface.
- Determine the public health risks from live poultry markets and assess the impact of interventions at different levels of the market chain.
- Improve understanding of the pathogenesis and modes of intra- and inter- species transmission of zoonotic influenza viruses through more detailed studies in humans and better animal models, .......

GAPS AT THE HUMAN- ANIMAL INTERFACE

Surveillance

Enhanced and sustainable epidemiological and virological surveillance in animals and humans (with improved scope and quality of data collected) for H5N1, H9N2, and H7 viruses as well as other potentially zoonotic animal influenza viruses, including swine influenza viruses (leading to closer estimates of the global prevalence and distribution of these viruses).

Solution to achieve better reporting of potentially zoonotic non- H5 and H7 subtypes

Improved surveillance in human populations potentially exposed to animal influenza viruses, including sero-surveillance and serological studies.

Increased support of virological surveillance, especially the use of screening tests, with confirmatory testing and more frequent and representative genetic characterization, antigenic characterization, and full genome sequencing of selected strains

Behavior change and assessment

Determination of costs and benefits of household, village, and community level animal management strategies and effect on influenza and other zoonoses.
GAPS AT THE HUMAN- ANIMAL INTERFACE

Virology
Phylogenetic information on other potentially zoonotic influenza subtypes
Understanding the contribution of avian virus reassortment to host range expansion, virulence, and transmissibility
Understanding determinants of fitness, and of the fitness loss/gain by reassortment among influenza viruses
Understanding of factors affecting cross protection of poultry and human vaccines
Understanding of the effect of vaccination on influenza virus evolution

Epidemiology
Expanded and consistent capture of epidemiological data on human zoonotic influenza infections (including use of standard data collection tools and standard definitions)

Outcomes since Verona

- Inter-agency collaboration from the outset of H1N1
- FAO/OIE/WHO/UNICEF Strategic Framework released at Sharm- el-Sheikh
- Winnipeg: OWOH expert consultation from ideas to action
*One health* is more than just the tearing down of existing silos.

*One health* is not about building new silos either!
We cannot continue to prepare for tomorrow’s fire, based on yesterday’s experience!

Verona I was about preparing for other threatening influenzas, beyond H5N1

Verona II must be about preparing to respond collaboratively, and beyond influenzas, to any emerging disease at the human-animal interface based on new strategies from new partnerships
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