(Brief) Global update on A(H5N1) influenza

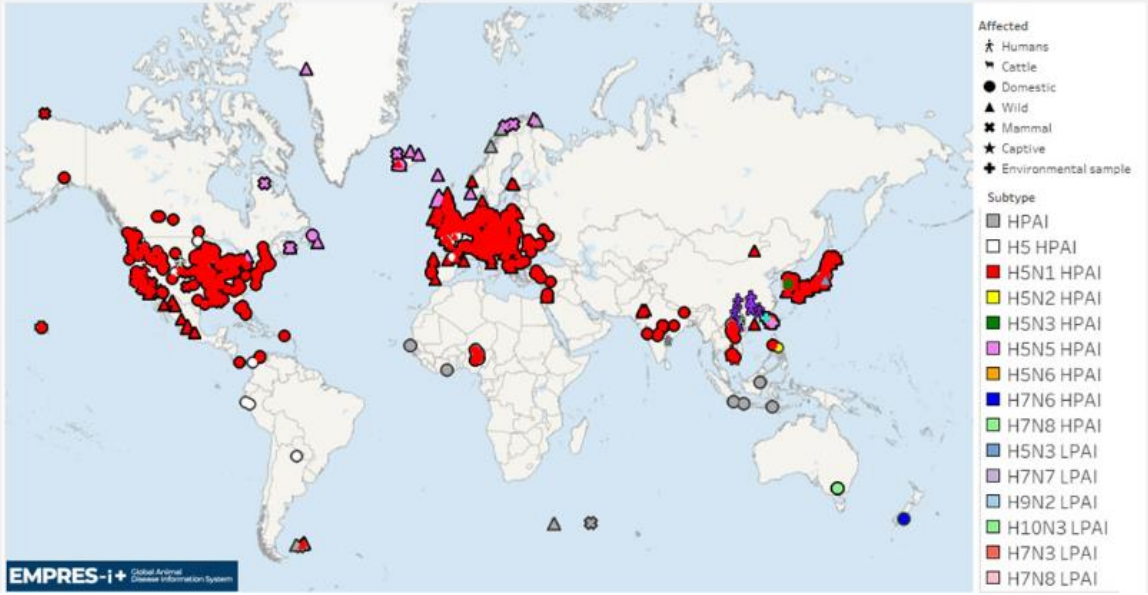
19 March 2025
R&D Blueprint Meeting

World Health Organization

Avian influenza outbreaks

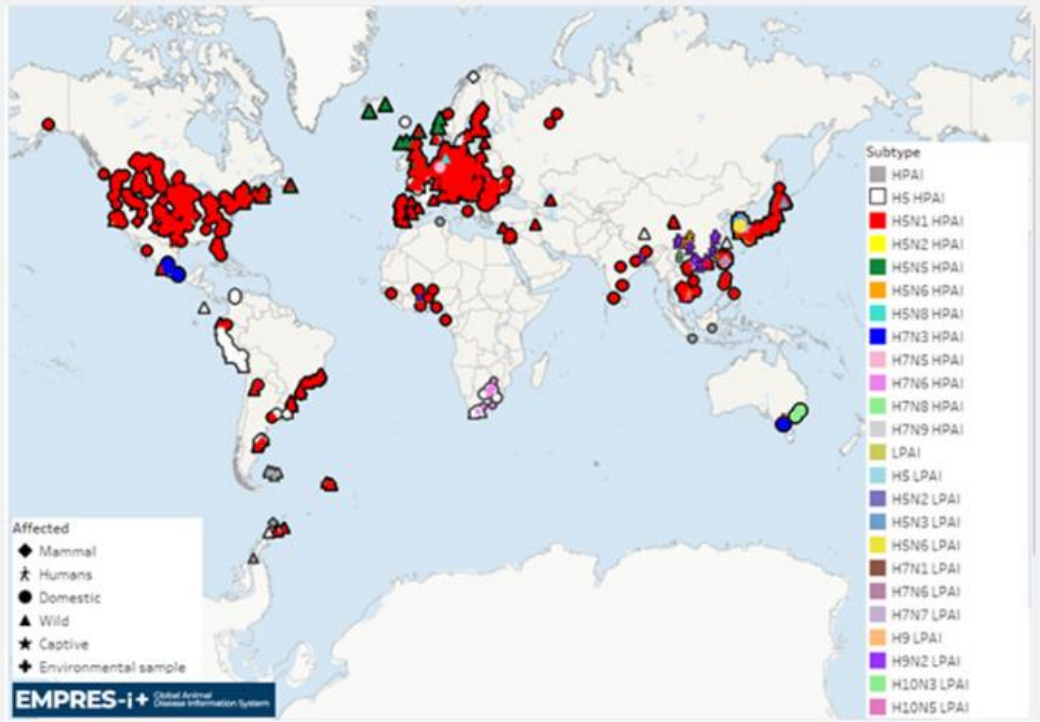
1 Oct 2024 to 27 Feb 2025

Map 1. *Global distribution of AIV with zoonotic potential* observed since 1 October 2024 (i.e. current wave)*



1 Oct 2023 to 26 Sept 2024

Map 1. *Global distribution of AIV with zoonotic potential* observed since 1 October 2023 (i.e. current wave)*



Note: Symbols may overlap for events in similar geographic locations.

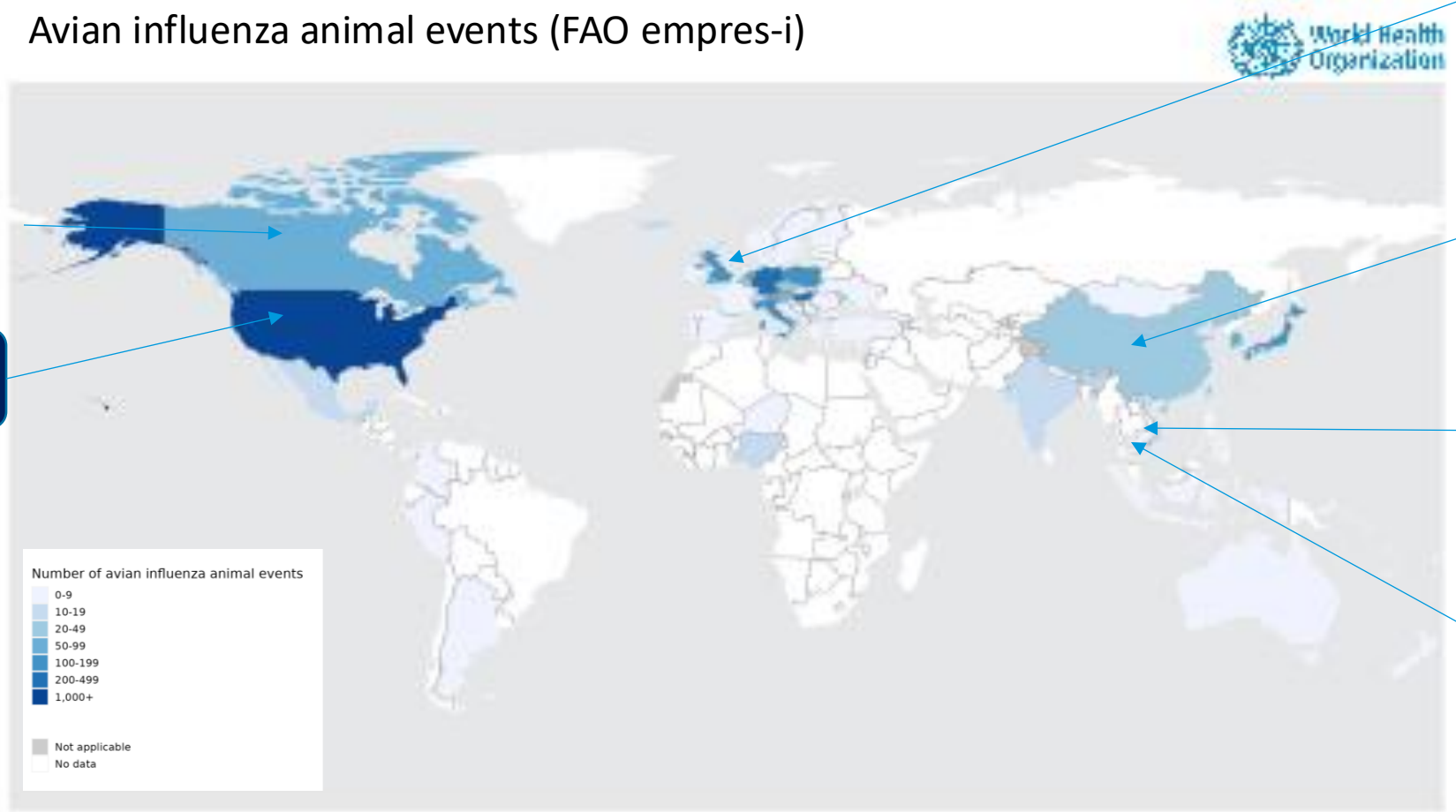
World Health Organization

https://www.fao.org/animal-health/situation-updates/global-aiv-with-zoonotic-potential

Avian influenza viruses with zoonotic potential in humans

Oct 2024-19 March 2025

Avian influenza animal events (FAO empres-i)



Canada: H5N1(1)

USA: H5 (53)

UK: H5N1 (1)

China: H10N3 (1), H9N2 (13)

Cambodia: H5N1 (2)

Viet Nam: H5 (1)

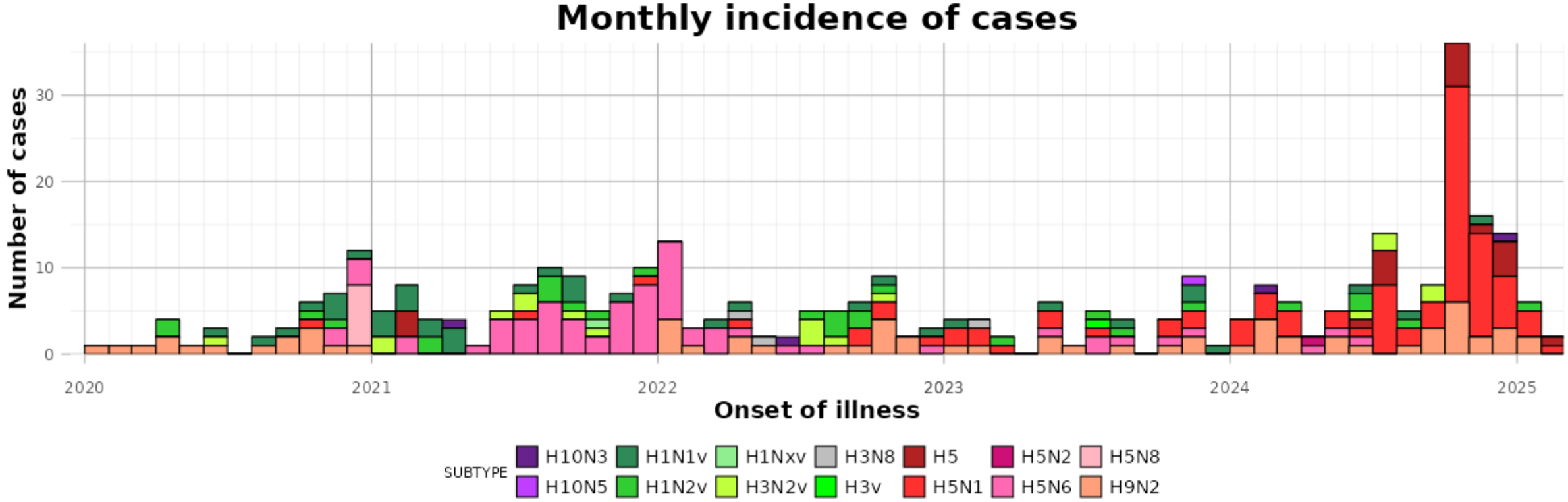
World Health Organization

Data Source: empres-i
Map Production: WHO Health Emergencies Programme

HEALTH EMERGENCIES programme

Detections of zoonotic influenza A viruses in humans

2020 to 13 March 2025



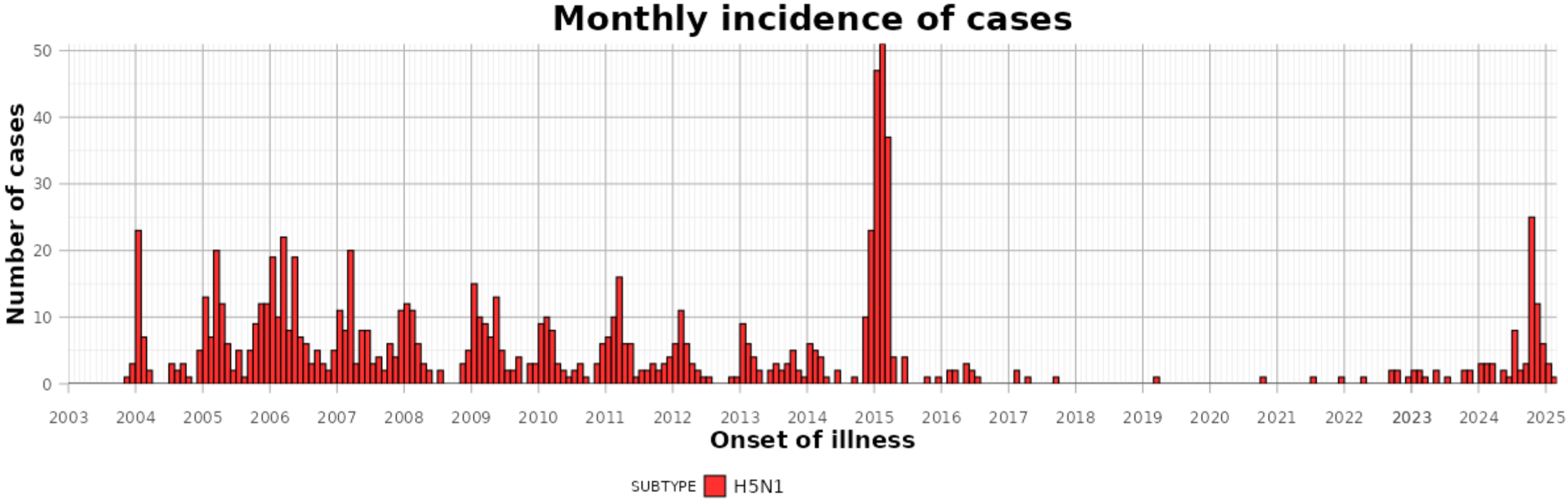
World Health Organization

*This may include detections in persons without symptoms that could represent contamination and not infection

HEALTH EMERGENCIES programme

Detections of zoonotic influenza A(H5N1) viruses in humans

2003 to 13 March 2025



World Health Organization

*This may include detections in persons without symptoms that could represent contamination and not infection. This does not include A(H5) cases where the N-type was not determined.

HEALTH EMERGENCIES programme

Summary of current situation

- Over 900 detections of **A(H5N1) in humans** reported from over 20 countries since 2003
  - **Sporadic** with direct or indirect **exposure** to infected animals or contaminated environments
  - Infections **can be severe** and even fatal
  - Available genetic sequences of the virus from the human cases similar to those from local **animals**
  - No sustained human-to-human transmission
- Avian influenza A(H5N1) viruses, especially those of clade 2.3.4.4b, continue to **diversify genetically** and **spread geographically**
- **This is a oncerning, evolving situation**
- **Prompt & thorough investigations** are critical, **early identification** of any unusual events that could signal person-to-person transmission of the virus and **timely reporting** are key to optimal outcome of response
- **Advancing pandemic influenza preparedness** at national, regional and global levels
- **Advancing research and development for H5N1**
- **Global collaboration and coordination are key to optimal outcome**
  - Sharing of sequences and viruses from humans and animals is critical
  - GISRS is an effective foundation for surveillance, preparedness and response

H5N1 virus from cattle – characteristics summary

- These viruses are **primarily avian viruses**
- **No consistent changes have been observed that would increase transmission to and among people**
- Alpha 2,3 sialic acid receptors (**avian virus-type**) are abundant in dairy cattle mammary tissue as well as in the respiratory tract.
- **Genetic analysis**
  - H5 clade 2.3.4.4b, **genotypes B3.13 and D1.1**
  - No known markers for reduced susceptibility to antiviral medicines, except in one virus from cow with a change in NA (T438I) associated with reduced susceptibility to (NAIs)
  - Humans likely to have limited immunity
- **Antigenic analysis**
  - Viruses **well covered by existing CVVs**

https://www.cdc.gov/flu/avianflu/spotlights/2023-2024/h5n1-analysis-texas.htm
Uyeki TM et al.. Highly Pathogenic Avian Influenza A(H5N1) Virus Infection in a Dairy Farm Worker. N Engl J Med. 2024 May 3

Main areas of WHO response and readiness

- **Surveillance**
  - Human-animal interface
  - Genetic and antigenic characterization of influenza viruses with WHO CCs and H5 reference labs
  - Risk assessment: WHO, Tripartite, GISRS, internal
- **Communications**
  - Briefings (webinars, journalists, MS briefings, technical partners, regions) and information products (EIS, DON), updated Q&A, etc.
- **Clinical care**
  - Updated influenza management guidelines
  - Updating WHO IPC ARI guidelines update to strengthen IPC measures while protecting health workers and patients
- **Community protection**
  - PHSM, food safety, RCCE, Vaccination demand/uptake, etc.
- **Medical countermeasures and benefits**
  - PIP, CVVs, i-MCM, Antiviral preparedness, etc.
- **Partner coordination**
  - Coordinating with animal health partners (FAO, WOAH, OFFLU, UNEP) and Food Safety colleagues, GOARN, other global agencies

Key asks for Member States

- Rapidly share clinical specimens, viruses, sequence data from all novel influenza for timely risk assessment
- Report through WOAH and IHR mechanisms
- Detect animal outbreaks through event-based surveillance and testing of animals as appropriate
- Share information between human and animal sectors at national and subnational levels
- Strengthen biosecurity surrounding animal outbreaks following WOAH guidance
- Multisectoral national and subnational RRT should ready and trained and to investigate outbreaks and collect needed data
- Enhance surveillance among occupationally exposed persons while emphasizing appropriate PPE
- Clinician networks should be sensitized to report all unusual events including unexplained severe respiratory
- Clinicians should also be provided with latest clinical guidance on management of severe acute respiratory illnesses