Zoonotic avian influenza and options for mitigation measures

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Update on global situation of avian influenza in humans

Overview of human cases of avian influenza

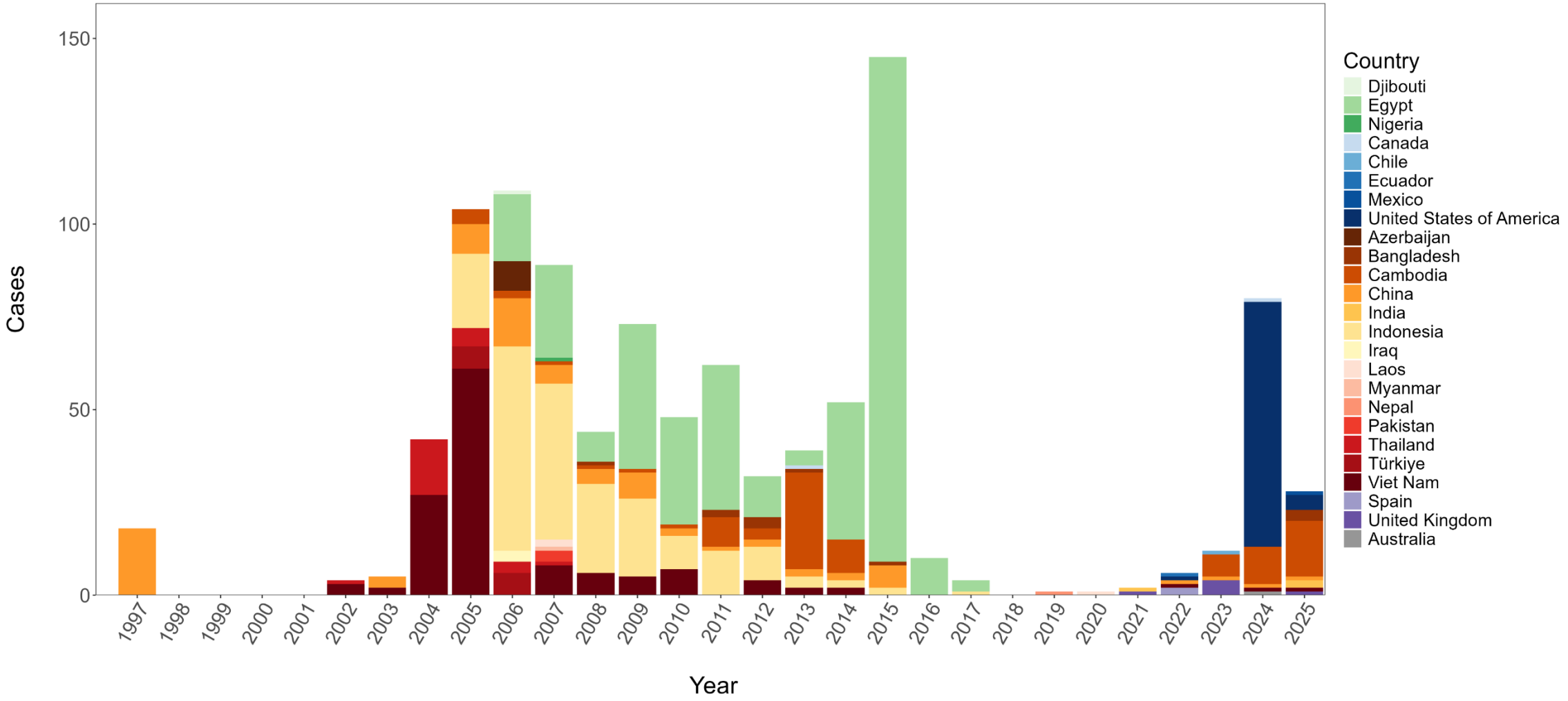
	Cases reported 2025-06-07 - 2025-09-08			Cases reported since first report			
Subtype	Cases reported	Deaths	Reporting countries	First report	Cases reported	Deaths	Reporting countries
A(H5N1)	13	3	3	1997	1010*	474**	25
A(H9N2)	5	0	1	1998	173	2	10
A(H10N3)	1	0	1	2021	6	0	1

*Human cases of A(H5) epidemiologically linked to A(H5N1) outbreaks at poultry and dairy cattle farms in the United States are included in the reported number of cases of A(H5N1).

**Deaths reported since 2003 out of a total of 990 cases reported 2003 - 3 September 2025. Mortality data are not available for cases reported prior to 2003.

Source: Avian influenza overview June–September 2025

Reported cases and detections of influenza A(H5N1) in humans 1997 – 8 Sep 2025



*includes detections due to suspected environmental contamination from Spain (2) and the United States (1) in 2022, and from the United Kingdom (3) in 2023
**Human cases of A(H5) epidemiologically linked to A(H5N1) outbreaks at poultry and dairy cattle farms in the United States are included in the number of A(H5N1) cases.

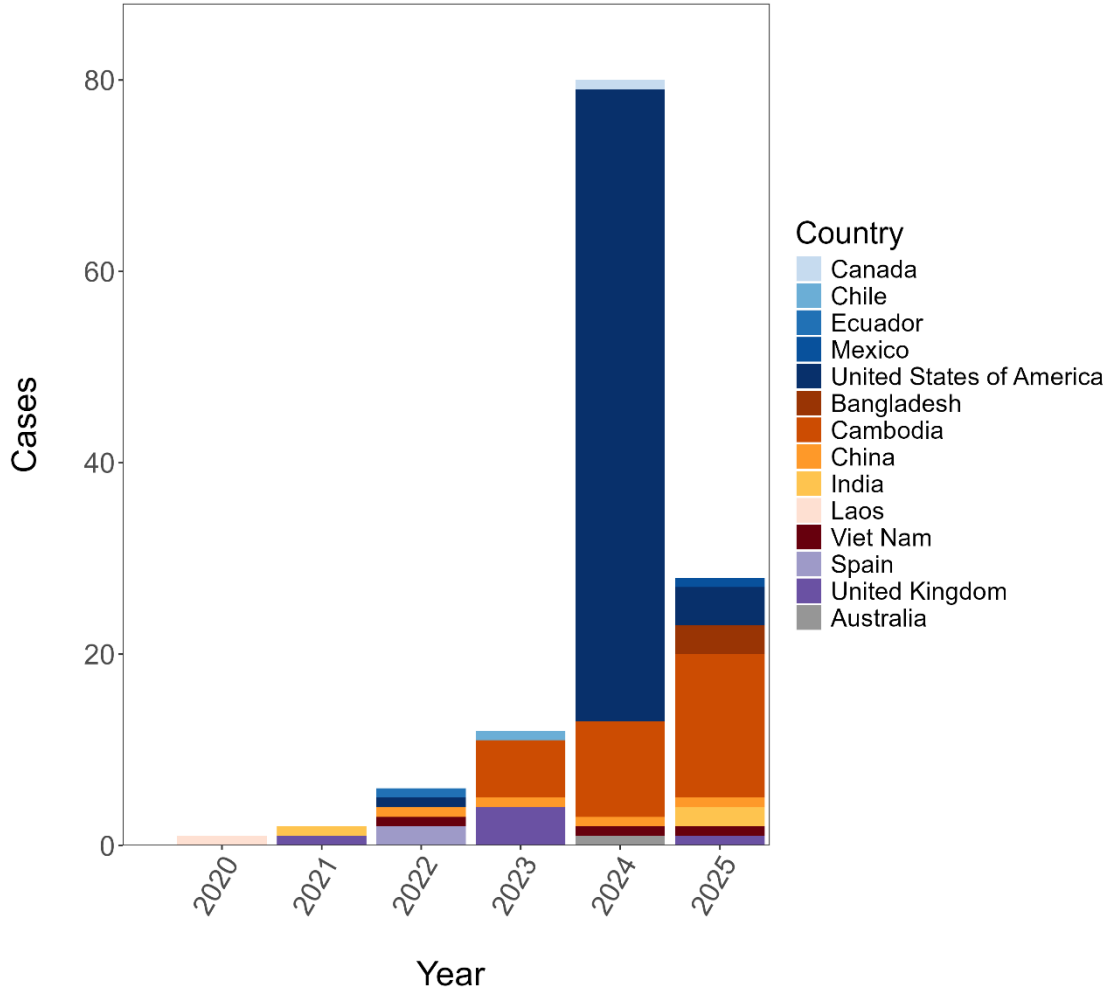
Source: Avian influenza overview June–September 2025

Reported cases and detections of A(H5N1) in humans 7 Jun – 8 Sep 2025

- Asia: 13 cases (1 Bangladesh, 11 Cambodia, 1 India)

- **Clinical presentation:** asymptomatic to severe
  - Case fatality among reported cases: 23%

- **Exposure:** 92% had known animal exposure reported



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Source : ECDC line list, WHO

Zoonotic avian influenza A(H5N1) 2.3.4.4b assessment

- No confirmed cases of A(H5N1) infection in humans in the EU/EEA
- Transmission from infected animals to humans remains infrequent
- No sustained human-to-human transmission
- A(H5N1) clade 2.3.4.4b viruses currently circulating in the EU/EEA:
  - Remain avian-like
  - Majority are sensitive to available antivirals used in humans
  - Are covered by WHO candidate vaccine viruses (pandemic preparedness) and vaccine recently authorized in the EU/EEA

- ECDC risk assessment of human infection in EU/EEA
  - low for general public
  - low-to-moderate for people occupationally or otherwise exposed to animals infected with avian influenza or a contaminated environment

Source: Avian influenza overview June–September 2025

Public health mitigation measures

- Communication and awareness
- Minimising exposure through appropriate personal protective measures and equipment
- Enhanced surveillance
- Monitoring and testing of exposed individuals to infected animals
- Antiviral drug use as treatment and post-exposure prophylaxis
- Vaccination

Source: Avian influenza overview June–September 2025; Preparedness, prevention and control related to zoonotic avian influenza; Drivers for a pandemic due to avian influenza and options for One Health mitigation measures

Coordinated One Health investigation and management of outbreaks in humans and animals caused by zoonotic avian influenza viruses

Establishing One Health strategy and actions for outbreak response

- One Health strategy and actions to be established:
  - Key stakeholders and responsibilities at national, regional and local level
  - Capacity needs and collaboration mechanisms
  - Tools for outbreak response
  - Joint training events and simulation exercises
  - Regulatory frameworks
  - Financial resources

One Health approach to investigating and controlling outbreaks caused by zoonotic avian influenza viruses

	Action	Involved actors	Output
A	Identify stakeholders across sectors for coordinated planning, information sharing, assessments and outbreak management.	Public health, veterinary, environmental health and occupational health authorities as well as other stakeholders, e.g. from the farming sector.	List of specific stakeholders and their contact details.
B	Agree on objectives and procedures for data collection and sharing – this should include structure of the data to be collected (metadata).	Public health, veterinary, environmental, and occupational health authorities.	Agreed objectives and procedures outlining what data is collected (list of variables to be collected) and how and when it is shared.
C	Prepare a checklist for collecting the relevant information on the number of exposed individuals, their level of exposure and relevant contact details.	Public health, veterinary, environmental health, and occupational health authorities as well as other stakeholders.	Checklist with all relevant information needed.
D	Develop technical recommendations and organisational procedures for the protection of workers, including the use of personal protective equipment (PPE).	Public health and occupational health authorities, as well as other stakeholders involved in national preparedness planning, in consultation with veterinary authorities and representatives of relevant farming sectors.	Recommendations and procedures (technical and organisational) on protection of workers and personal protective equipment (PPE) use.
E	Design information to be given to exposed individuals in suspected animal outbreaks.	Public health, veterinary, and occupational health authorities.	Pamphlet with information on risk mitigation measures, contact points for questions and actions to be taken if symptoms develop.
F	Develop model for joint risk assessment.	Public health, veterinary, and environmental health authorities.	Model for joint zoonotic avian influenza risk assessment.
G	Establish plans for response (e.g. for vaccination of humans) and monitoring.	Public health, occupational health, and environmental health authorities.	Action plan that can be used in different outbreak scenarios, including monitoring of the response.

- Specific for zoonotic avian influenza
- Create One Health team(s)
- Develop One Health strategies and tools for investigating, assessing, sharing data and information

Scenarios at the human-animal-environmental interface of zoonotic avian influenza outbreaks

1a) One Health actions triggered by a suspected outbreak in **kept animals of listed species** (Aves - Birds)

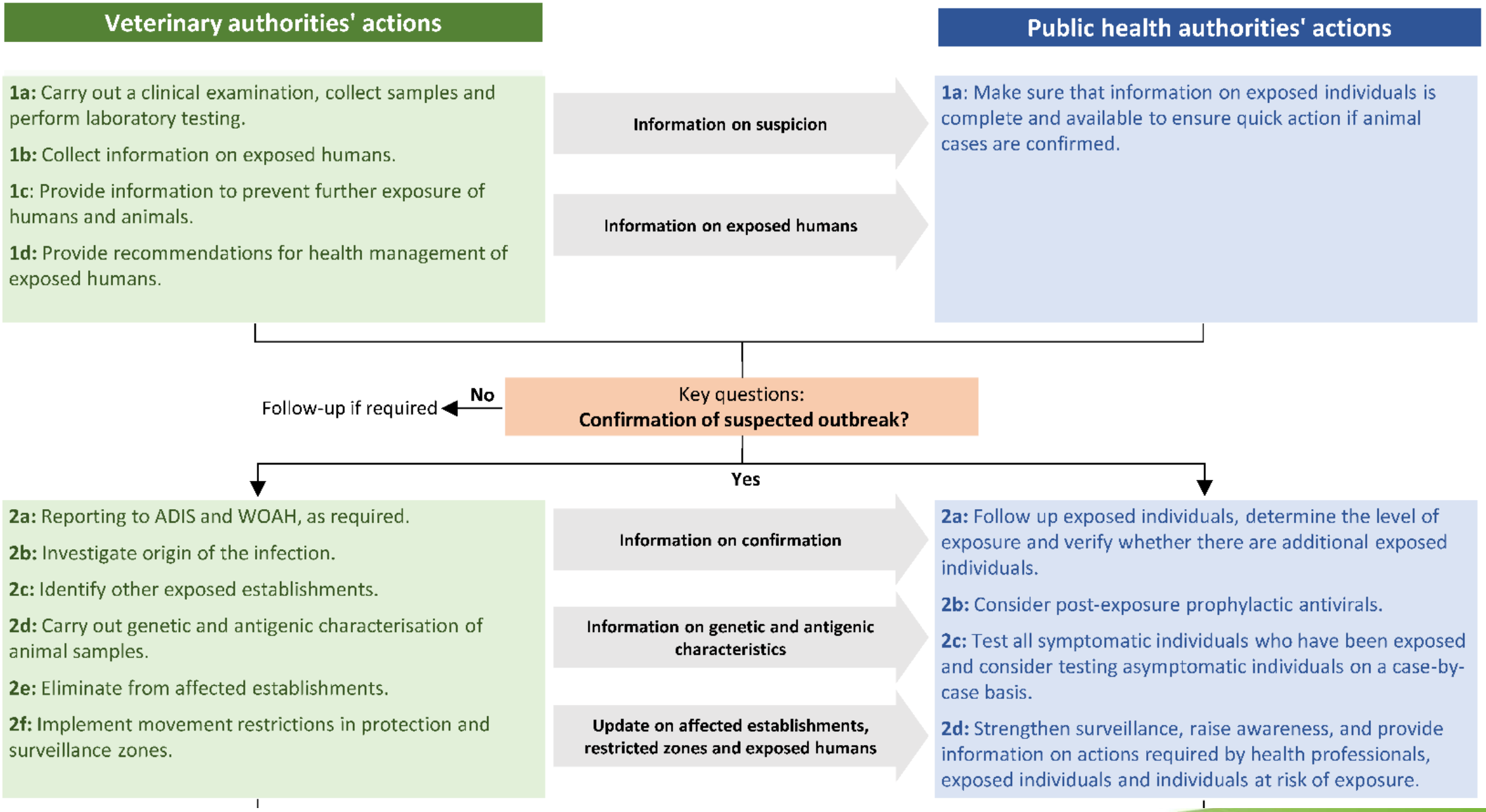
1b) One Health actions triggered by a suspected outbreak in **kept animals from non-listed species** or cases in **companion animals**

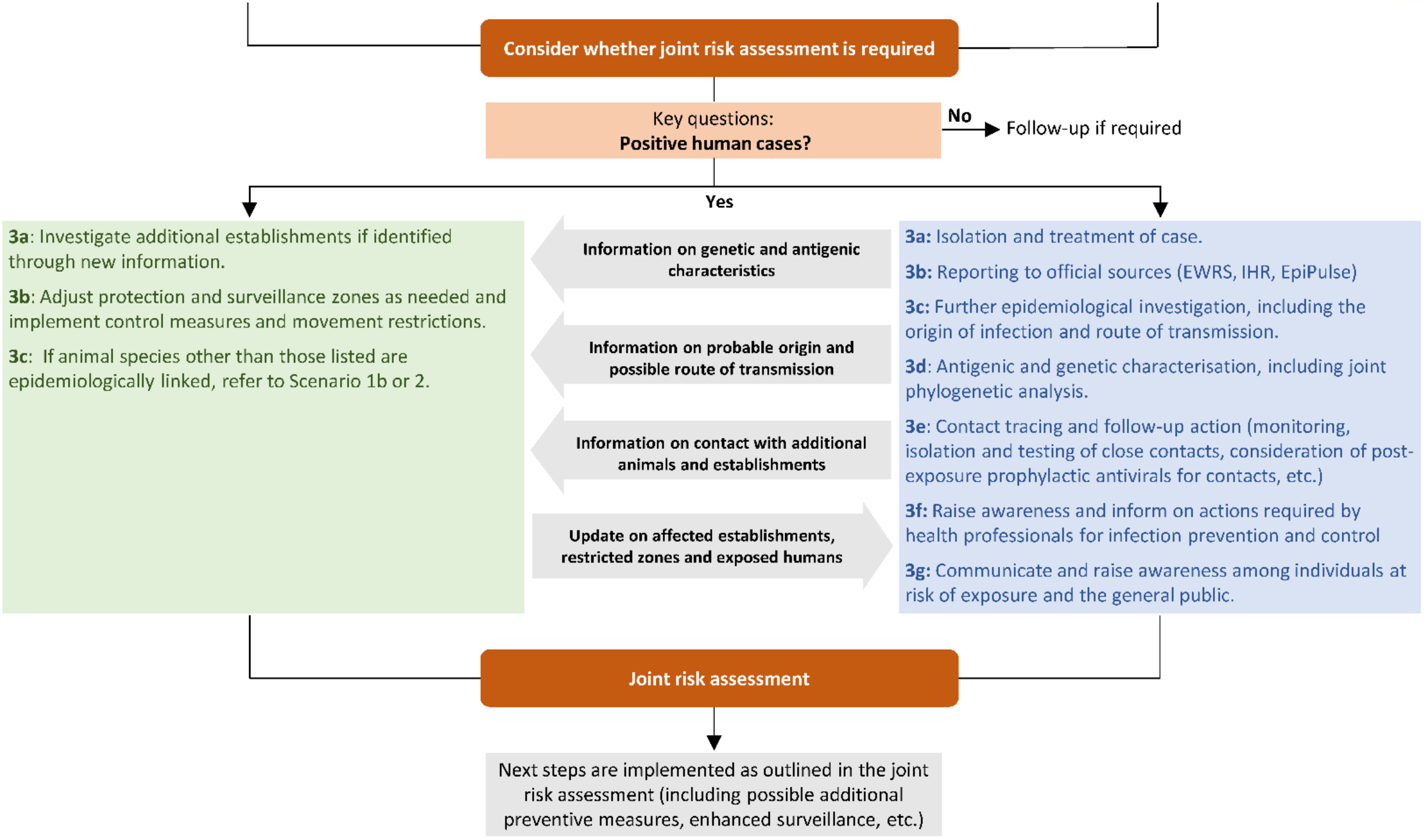
2) One Health actions triggered by suspected cases in **wild birds or mammals**

3) One Health actions triggered by **probable cases in humans**

4) One Health actions triggered by AIV detection in an **environmental sample** (e.g., wastewater, surface water or other environmental samples)

Scenario 1a: Suspected outbreak in kept animals of listed species (*Aves*)




Consider whether joint risk assessment is required
Key questions:
Positive human cases?
No
Follow-up if required
Yes
3a: Investigate additional establishments if identified through new information.
3b: Adjust protection and surveillance zones as needed and implement control measures and movement restrictions.
3c: If animal species other than those listed are epidemiologically linked, refer to Scenario 1b or 2.
Information on genetic and antigenic characteristics
Information on probable origin and possible route of transmission
Information on contact with additional animals and establishments
Update on affected establishments, restricted zones and exposed humans
3a: Isolation and treatment of case.
3b: Reporting to official sources (EWRS, IHR, EpiPulse)
3c: Further epidemiological investigation, including the origin of infection and route of transmission.
3d: Antigenic and genetic characterisation, including joint phylogenetic analysis.
3e: Contact tracing and follow-up action (monitoring, isolation and testing of close contacts, consideration of post-exposure prophylactic antivirals for contacts, etc.)
3f: Raise awareness and inform on actions required by health professionals for infection prevention and control
3g: Communicate and raise awareness among individuals at risk of exposure and the general public.
Joint risk assessment
Next steps are implemented as outlined in the joint risk assessment (including possible additional preventive measures, enhanced surveillance, etc.)

Additional information

Event monitoring and risk assessment

- Situational awareness and early warning - Communicable Disease Threat Report (CDTR)
- Quarterly ECDC/EFSA monitoring report - Avian influenza overview Jun–Sep 2025

Case and outbreak investigation

- 2025 ECDC/EFSA Coordinated One Health investigation and management of outbreaks in humans and animals caused by zoonotic avian influenza viruses
- 2023 Investigation protocol for human exposures and cases of avian influenza in the EU/EEA
- 2023 EU/EEA country survey on measures applied to protect exposed people during outbreaks of highly pathogenic avian influenza

Preparedness

- 2025 ECDC/EFSA Preparedness, prevention and control related to zoonotic avian influenza
- 2025 Scenarios for pre-pandemic zoonotic influenza preparedness and response
- 2024 ECDC/EFSA Drivers for a pandemic due to avian influenza and options for One Health mitigation measures
- 2024 ECDC/EFSA SIMEX on avian influenza together with public health and animal health authorities in EU/EEA

Surveillance

- Ongoing Reporting of human cases of zoonotic influenza in the EU/EEA and outcomes of contact tracing
- 2025 Reporting protocol for zoonotic influenza virus
- 2024 Enhanced influenza surveillance testing to detect avian influenza virus infections in the EU/EEA during the inter-seasonal period
- 2024 Surveillance and targeted testing for the early detection of zoonotic influenza in humans during the winter period in the EU/EEA
- 2023 Testing and detection of zoonotic influenza virus infections in humans in the EU/EEA, and occupational safety and health measures for those exposed at work

Laboratory support

- Ongoing Regular laboratory network meetings and scientific seminars on avian influenza
- Ongoing Wet-lab and bioinformatics EQAs and trainings and centralised support for virus characterisation
- 2025 External quality assessment for molecular detection, subtyping and characterisation of potentially zoonotic type A influenza viruses, 2024
- 2023 Survey on laboratory capacity for molecular diagnosis and characterisation of zoonotic influenza viruses

Thank you