

Global Context

In 2020, the highly pathogenic avian influenza (HPAI) virus¹ subtype H5N1 of clade 2.3.4.4b caused an unprecedented number of deaths in wild birds and poultry in numerous countries in Africa, Asia, and Europe (1). In 2021, this virus spread through major waterfowl flyways to North America and, in 2022, to Central and South America (1). By 2023, outbreaks in animals were reported from 14 countries and territories, mainly in the Americas (1, 2).

In recent years, there has been an increase in the detection of the influenza A(H5N1) virus in non-avian species worldwide, including terrestrial and marine mammals, both wild and domestic (companion and production). Since 2022, 22 countries on three continents, including the Americas, have reported outbreaks in mammals to the World Organisation for Animal Health (WOAH) (3).

Historically, since the beginning of 2003 and as of 22 April 2025, 973 human cases of avian influenza A(H5N1), including 470 deaths (48% case fatality rate), were reported to the World Health Organization (WHO) from 25 countries globally (4).

Summary of the situation in the Americas Region

Since 2022 and as of epidemiological week (EW) 18 of 2025, a total of 19 countries and territories² in the Americas Region reported 4,948 animal outbreaks³ of avian influenza A(H5N1) to WOA (3), representing 235 additional outbreaks since the last epidemiological update on avian influenza A(H5N1) published by the Pan American Health Organization/World Health Organization (PAHO/WHO) on 4 March 2025 (3, 5).

Since 2022 and as of 12 May 2025, 75 human infections caused by avian influenza A(H5) have been reported in five countries in the Americas, with one additional case reported since the 4 March 2025 PAHO/WHO epidemiological update on avian influenza A(H5N1) (**Figure 1**) (5,

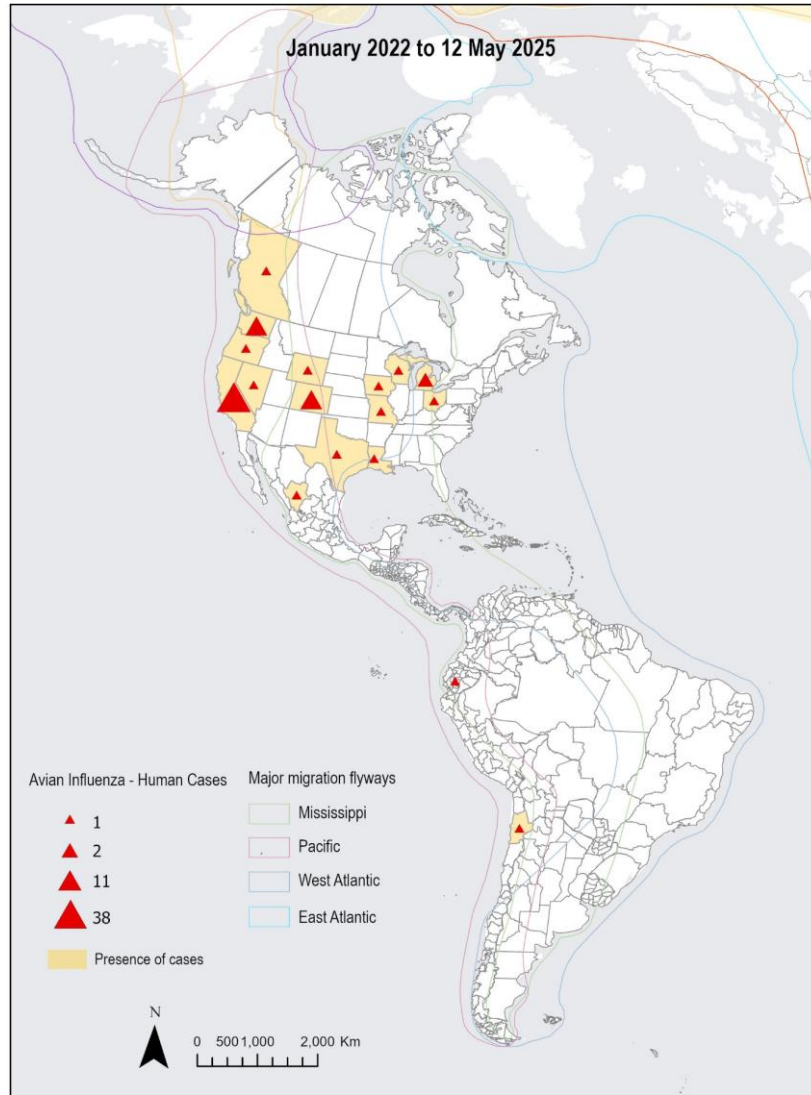
¹ Broadly speaking, the multiple strains of avian influenza virus can be classified into two categories according to the severity of disease presentation in poultry: low pathogenic avian influenza viruses (LPAIV) and highly pathogenic avian influenza viruses (HPAIV).

² Argentina, the Plurinational State of Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Ecuador, the Falkland Islands, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, the United States of America, Uruguay, and the Bolivarian Republic of Venezuela.

³ Please note that current figures represent the number of outbreaks, which may include multiple epidemiologically linked records and updates in reported case counts for each outbreak. This may result in lower counts than those reported in previous publications. These figures reflect only officially verified outbreaks reported to WOA, ensuring accuracy according to WOA standards.

6). The most recent human case of avian influenza A(H5N1) reported in the Americas Region was reported in Mexico on 2 April 2025 (6-8), 71 cases have been reported in the United States of America – one in 2022 and 70 since 2024 (9), one case in Canada was confirmed on 13 November 2024 (10), one case in Chile was reported on 29 March 2023 (11), and one case in Ecuador was reported on 9 January 2023 (12).

Figure 1. Human cases of avian influenza A(H5N1) in the Americas Region since 2022 and as of 9 May 2025.



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Source: Adapted from information publicly available in Ministries of Health and official national agencies web pages (6-12).

Situation by country and/or territory of outbreaks in animals in 2025

Among birds

In 2025, up to EW 18, 330 outbreaks of avian influenza have been reported in domestic (n= 312) and/or wild birds (n= 18) among the following six countries in the Americas Region to WOA: Argentina (n= 1), Canada (n= 24), Mexico (n= 2), Panama (n= 1), Peru (n= 14), and the United States (n= 288) (**Table 1**) (3). Since the 4 March 2025 PAHO/WHO Epidemiological Update on avian influenza A(H5N1), 210 additional outbreaks have been reported in birds (5). In addition to these outbreaks, in 2025, up to 13 May, over 1,250 detections of avian influenza A(H5N1) were recorded in wild birds in the United States, 154 detections in Canada, and eight in the Falkland Islands (13-15).

Among mammals

In 2025, up to EW 18, 75 outbreaks in wild (n= 13) and domestic (n= 62) mammals have been reported to WOA in the United States (**Table 1**) (3). Since the first notification of influenza A(H5N1) in dairy cattle in March 2024 in the United States, outbreaks have been identified in 17 states⁴, affecting 1,053 dairy herds as of 9 May 2025 (9, 13). Since the 4 March 2025 PAHO/WHO epidemiological update on avian influenza A(H5N1), 77 additional dairy herds have been affected in the United States (5).

Additionally, as of 13 May, the Canadian Food Inspection Agency (CFIA) has reported seven detections in wild mammals in Canada in 2025 through their High Pathogenicity Avian Influenza - Wildlife Dashboard (14).

Table 1. Avian influenza outbreaks or detections in birds and mammals in the Americas Region in 2025, as of 13 May.

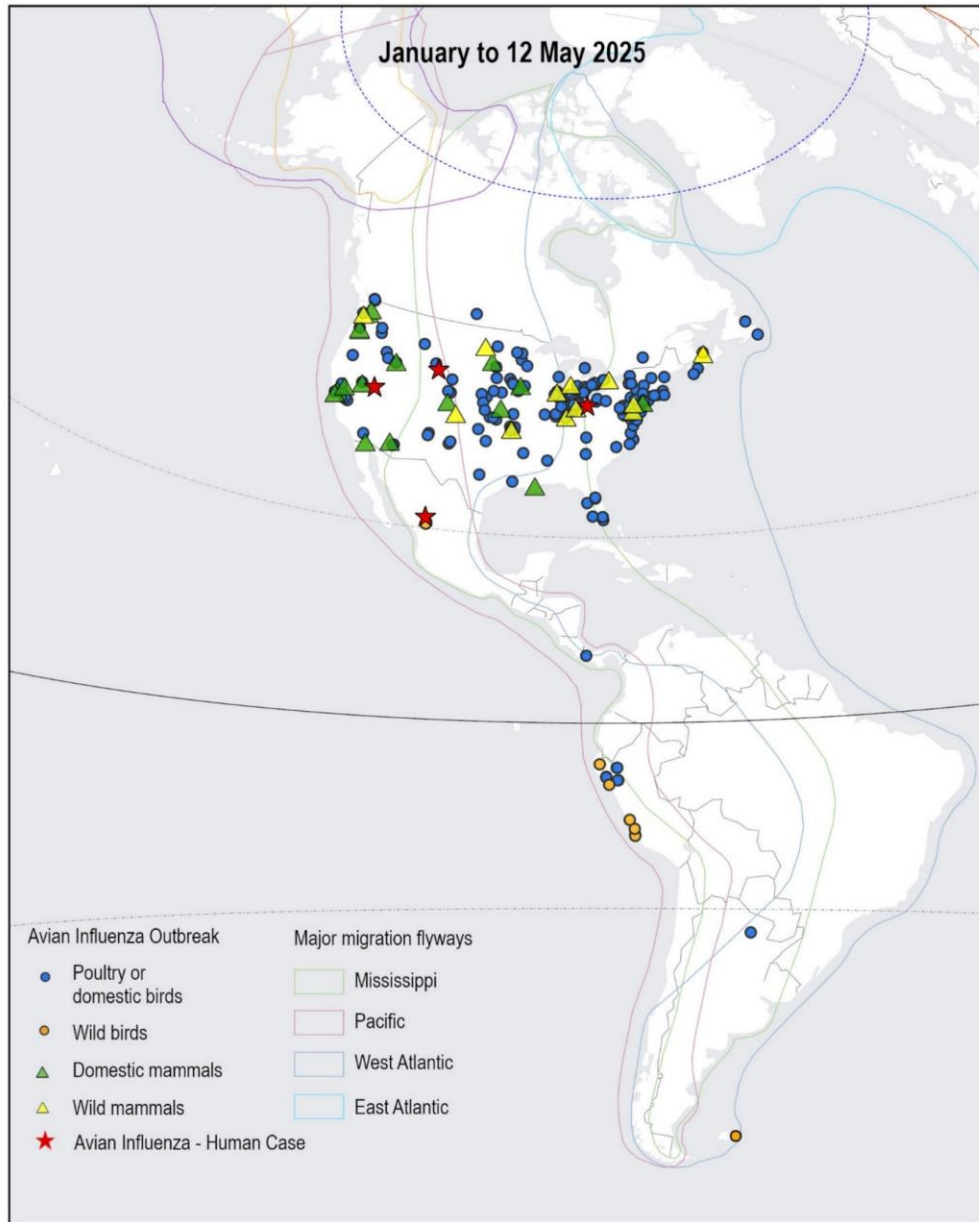
Country/Territory	In birds		In mammals	
	Wild	Domestic	Wild	Domestic
Argentina		Yes		
Canada	Yes	Yes	Yes	
Falkland Islands	Yes			
Mexico	Yes			
Panama		Yes		
Peru	Yes	Yes		
United States	Yes	Yes	Yes	Yes

Source: Adapted from data published by the World Organization for Animal Health and data published online by Ministries of Health and official national agencies (3, 13-15).

A geographical visualization of the outbreaks in animals, by type, in 2025, illustrating the main migratory flyways in the Americas Region is presented in **Figure 2**, and the data for the period of 2023 through 2024 is shown in **Figure 3**.

⁴ California, Colorado, Idaho, Iowa, Kansas, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Dakota, Texas, Utah, and Wyoming.

Figure 2. Avian influenza outbreaks by species and main migratory flyways of wild birds by type of animal, in 2025 up to 12 May in the Americas Region.



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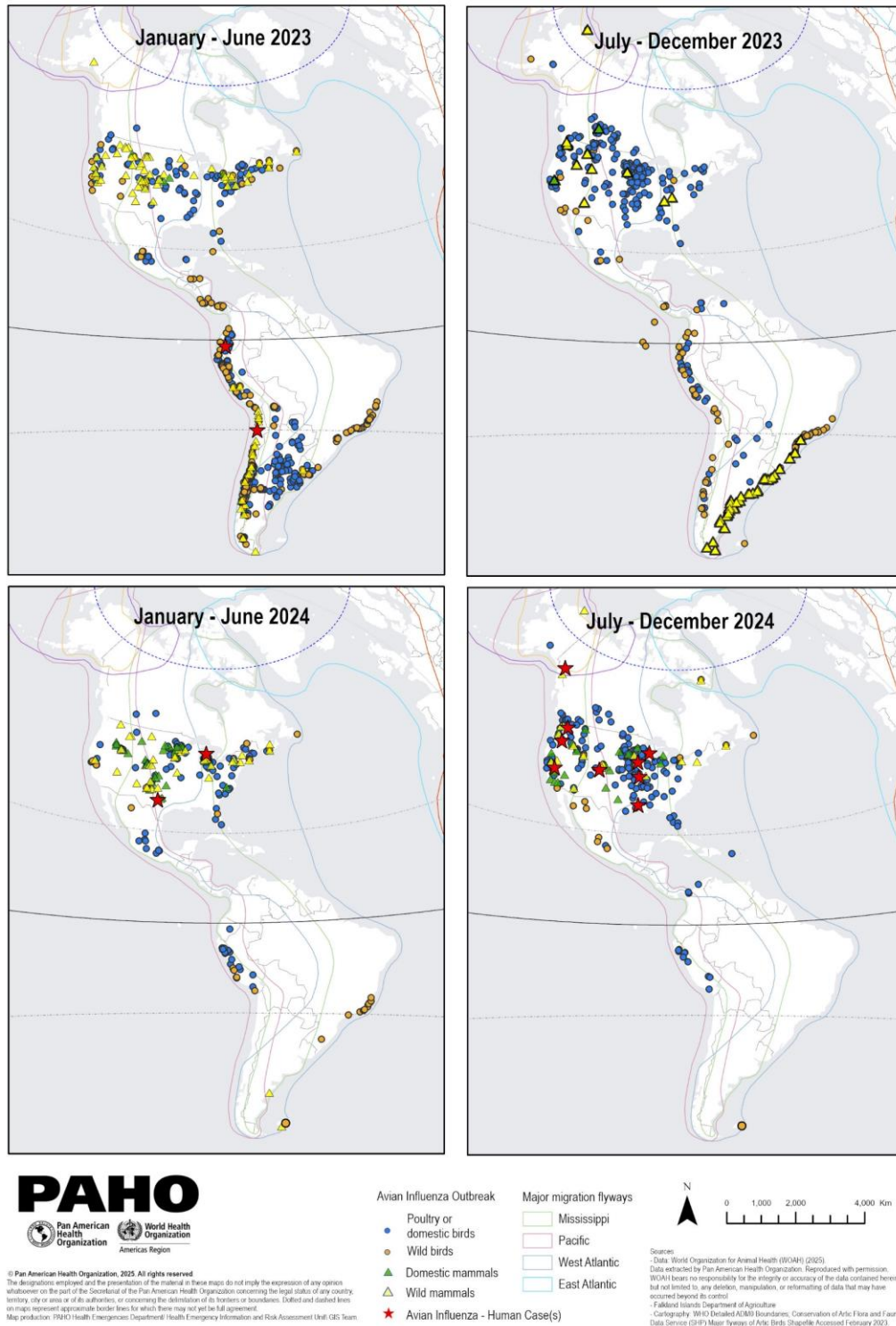
0 500 1,000 2,000 Km



Sources
 - Data: World Organization for Animal Health (WOAH) (2025).
 Data extracted by Pan American Health Organization. Reproduced with permission. WOAHA bears no responsibility for the integrity or accuracy of the data contained herein, but not limited to, any deletion, manipulation, or reformatting of data that may have occurred beyond its control
 - Falkland Islands Department of Agriculture
 - Cartography: WHO Detailed ADM0 Boundaries; Conservation of Arctic Flora and Fauna - Data Service (SHP) Major flyways of Arctic Birds Shapefile Accessed February 2023.

Source: Adapted from data published by the World Organization for Animal Health and data published online by Ministries of Health and official national agencies (3, 6-15).

Figure 3. Avian influenza outbreaks by species and main migratory flyways of wild birds by type of animal, in 2023 and 2024 in the Americas Region.



Source: Adapted from data published by the World Organization for Animal Health and data published online by Ministries of Health and official national agencies (3, 6-15).

Situation by country of human cases in 2025

Since the beginning of 2025 and up to EW 18, four human cases of avian influenza A(H5N1) have been reported in the Americas Region, in Mexico (n= 1) and the United States (n= 3) (**Figure 2**) (6-9, 16). Since the PAHO/WHO Epidemiological Update on avian influenza A(H5N1) in the Americas Region of 4 March 2025 (5), Mexico reported the first human case of avian influenza A(H5N1) there (6-8), and no new human cases have been reported in other countries of the Region.

The following is a summary of the human case of influenza A(H5N1) reported in Mexico.

On 2 April 2025, the IHR National Focal Point (NFP) of **Mexico** notified to PAHO/WHO a laboratory-confirmed human infection caused by avian influenza A(H5N1) virus in the state of Durango, Mexico. This case was the first confirmed human case of avian influenza A(H5N1) in the country (6-8). The case is a three-year-old female from the state of Durango, who tested positive for avian influenza A(H5N1) at the Institute of Epidemiological Diagnosis and Reference (InDRE per its acronym in Spanish). The case had no underlying medical conditions, had not received seasonal influenza vaccine, and had no history of travel (6-8). The case onset symptoms on 7 March 2025, with fever, malaise, and vomiting. On 13 March, the case was hospitalized for drowsiness and signs of respiratory failure. On 14 March, the case began treatment with oseltamivir. On 16 March, she was transferred to a tertiary hospital due to ventilatory failure. On 1 April, the infection was confirmed RT-PCR by the InDRE. The virus was characterized as avian influenza A(H5N1) clade 2.3.4.4b genotype D1.1 by sequencing. During this time, the patient's condition gradually deteriorated, and the case progressed to a fatal outcome due to respiratory complications and multiorgan failure on 8 April (6-8).

Given that no direct source of contamination was identified, it was determined that the source of infection was indirect contamination. During contact tracing activities, 91 people were identified. Samples of pharyngeal and nasopharyngeal exudate were collected from 49 contacts. The laboratory results of these individuals were negative for avian influenza A(H5N1). To date, no additional cases of human avian influenza A(H5N1) infection have been identified in relation to this case (6-8).

Recommendations for Member States

While avian influenza outbreaks largely affect animals, they pose continuing risks to public health. The Pan American Health Organization/World Health Organization (PAHO/WHO), together with the Food and Agriculture Organization of the United Nations (FAO) and the World Organization for Animal Health (WOAH), urge Member States to work collaboratively and intersectorally to preserve animal health and protect human health (1, 2, 17-19).

The sporadic cases of avian influenza A(H5N1) 2.3.4.4b clade virus detected in humans are mostly associated with direct contact with infected animals and contaminated environments. Current evidence reflects that the virus does not appear to be transmitted from one person to another. However, it is imperative to strengthen intersectoral surveillance to detect any possible changes in this situation (2).

Research continues to determine the risk to humans from consuming raw or unpasteurized milk contaminated with influenza A(H5N1) virus. The FAO and WHO recommend consuming pasteurized milk because of the potential health risks associated with various zoonotic

pathogens (17-19). There is no evidence to suggest that influenza A(H5N1) or other avian influenza viruses can be transmitted to humans through the consumption of properly prepared and cooked poultry or eggs (17-20).

WOAH has specific recommendations on the avian influenza situation in birds and mammals, advising countries to maintain an intensified surveillance of the disease in domestic and wild birds, preventing the spread of the disease through the implementation of biosecurity measures (21).

Recommendations to strengthen human-animal surveillance.

PAHO/WHO urges Member States to strengthen surveillance in both animals and humans through an intersectoral approach, ensuring timely detection of cases to monitor possible changes in the epidemiology of the virus (22). Epidemiological surveillance for avian influenza A(H5N1) should be strengthened in populations at higher risk of exposure, including agricultural workers, veterinarians, health and laboratory personnel, by systematically identifying signals. These include respiratory disease, conjunctivitis, or encephalitis in people with recent exposure to infected animals, as well as cases of severe acute respiratory infection (SARI) or pneumonia in travelers coming from areas where avian influenza A(H5N1) has been detected (22). Monitoring clusters of SARI or atypical symptoms in family, work, or social settings, is also recommended. The implementation of surveillance in health facilities and at-risk populations, with notification and response protocols is essential. Actively monitoring people at risk of exposure (in areas with confirmed animal outbreaks) to strengthen the immediate notification of suspected events, ensuring a rapid and coordinated response involving all sectors is recommended (20, 22, 23).

Human samples must be collected by trained personnel in compliance with all biosafety standards, including the use of appropriate personal protective equipment (PPE) for respiratory viruses. Upon identifying suspected human cases of avian influenza A(H5N1), a respiratory swab sample (and a conjunctival swab if the patient presents conjunctivitis) should be taken and sent to National Influenza Centers (NICs) and National Reference Laboratories (NRLs) for analysis (24). For more information, refer to these publications on respiratory sample collection and the laboratory testing algorithm for samples from suspected avian influenza A(H5N1) patients (25).

A suspected or confirmed case of human infection with avian influenza A(H5N1) must be immediately reported to the WHO Regional Contact Point for the International Health Regulations (IHR), in accordance with Annex 2 of the IHR, this notification should be made via the National IHR Focal Point (NFP) using the official IHR channels. The report must include available epidemiological and virological results. It is recommended that health ministries establish intersectoral communication protocols, notifying agricultural and environmental authorities of any suspected or confirmed human case (26).

Operational Infection Prevention and Control (IPC) Measures in Health and Agricultural Settings

In response to an outbreak of avian influenza A(H5N1), it is essential to implement robust infection prevention and control (IPC) measures within healthcare settings. This includes reinforcing standard precautions, which aim to reduce the transmission of pathogens. Droplet precautions must be applied for patients presenting with respiratory symptoms (27). Additionally, based on risk assessment, airborne precautions should be implemented during

aerosol-generating procedures. These measures must be in place when the patient enters the facility, making early triage critical (28).

Individuals at risk of infection include those directly or indirectly exposed to infected birds or other animals – whether domestic, wild, or captive. This includes people involved in animal handling, slaughter, or the cleaning and disinfection of affected farms. Therefore, it is recommended that good agricultural practices and strict hygiene protocols be implemented, including the use of appropriate personal protective equipment (PPE) to prevent zoonotic transmission (17-19, 22, 23).

Given the elevated risk for individuals working in environments with infected or potentially infected animals, preventive and protective measures are essential. These include training on the correct use of PPE, respirator fit testing, and proper disposal or disinfection procedures (29). PAHO/WHO also urges Member States to establish intersectoral surveillance systems and ensure rapid notification and response protocols to contain outbreaks at the source (30, 31).

PAHO/WHO urges Member States to work collaboratively and in an intersectoral manner to preserve animal health and protect public health. It is essential that preventive measures for avian influenza be implemented at the source, protocols for detection, notification and rapid response to outbreaks in animals be established, surveillance for both animal and human influenza be strengthened, epidemiological and virological investigations be carried out in relation to animal outbreaks and human infections, genetic information about viruses be shared, thereby fostering collaboration between animal and human health settings, effectively communicating risk, and ensuring preparedness for a potential influenza pandemic at all levels (30, 31).

Detailed information on additional key recommendations for Member States with a One Health approach, which include coordination for intersectoral surveillance and response, as well as prevention measures and risk communication, can be found in the epidemiological update published by the Pan American Health Organization / World Health Organization (PAHO/WHO) on 24 January 2025, available from: <https://www.paho.org/en/documents/epidemiological-update-avian-influenza-ah5n1-americas-region-24-january-2025> (26).

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Useful links

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