



Investigation and initial clinical management of possible human cases of avian influenza viruses that have been associated with severe human disease

Note: There is [separate guidance](#) for possible human cases that are associated with an incident involving avian species within the UK.

Before continuing with the initial assessment

Isolate in a single occupancy room, preferably a respiratory isolation room and ideally under negative pressure; positive pressure rooms must not be used, patient to minimise contact/exposure to staff and other patients, and ask the **patient to wear a surgical mask**.

Wear personal protective equipment – as a minimum, this should be a correctly fitted FFP3 respirator, gown, gloves and eye protection.

Start oseltamivir treatment immediately if the patient meets case definition for avian influenza. For guidance on dosage refer to [PHE guidance on the use of antiviral agents for the treatment and prophylaxis of seasonal influenza](#)

FOR ALL CASES WITH A TRAVEL HISTORY TO CHINA, CONSIDER IF NOVEL CORONAVIRUS IS A RELEVANT RISK. Refer to PHE guidance at: www.gov.uk/government/collections/wuhan-novel-coronavirus

Investigation and initial clinical management of possible human cases of avian influenza that have been associated with severe human disease v2

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Public Health England

Wellington House

133-155 Waterloo Road

London SE1 8UG

Tel: 020 7654 8000

www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk)

Facebook: www.facebook.com/PublicHealthEngland

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Case definition for possible cases

Clinical criteria
a) Fever $\geq 38^{\circ}\text{C}$ AND lower respiratory tract symptoms (cough or shortness of breath) or CXR findings of consolidation or ARDS OR b) other severe / life-threatening illness suggestive of an infectious process Additionally, patients must fulfil a condition in either category 1 or 2 of the exposure criteria below
Exposure criteria
For H7N9, H9N2, H5N1, H5N6 and any other avian influenza associated with severe human disease (1) Close contact (within 1 metre) ¹ with live, dying or dead domestic poultry or wild birds, including live bird markets, in an area of the world affected by avian influenza ¹ or with any confirmed infected animal, in the 10 days before the onset of symptoms OR (2) In the 10 days before the onset of symptoms: Close contact ¹ with <ul style="list-style-type: none">• a confirmed human case of avian influenza• human case(s) of unexplained illness resulting in death from affected areas²• human cases of severe unexplained respiratory illness from affected areas²

¹ This includes handling laboratory specimens from cases without appropriate precautions, or was within 1 metre distance/directly providing care/touching a case/within close vicinity of an aerosol generating procedure, from 1 day prior to symptom onset and for duration of symptoms/positive virological detection.

² For H7N9, H5N1 and H5N6 see the HCID country list: www.gov.uk/guidance/high-consequence-infectious-disease-country-specific-risk. For H9N2, affected areas include China and Oman. If unsure, discuss with PHE National Infection Service.

CAUTION: Clinicians should be aware of other respiratory infections among travellers with similar presentations such as Legionnaire's disease or MERS-CoV, if there is an appropriate travel or potential exposure history for those infections. Consult the [MERS-CoV possible case algorithm](#) to inform assessment.

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1) Assess if the above case definition is met

a. **No, does not meet case definition:** Unlikely to be avian influenza – treat and investigate as clinically indicated for other infections/causes.

b. **Yes, does meet case definition: Manage as possible case.**

IMPORTANT - The following precautions should be taken as soon as the possibility of avian influenza has been identified:

- staff PPE: correctly fitted FFP3 mask, gown, gloves and eye protection
- patient location: isolate in a single occupancy room, preferably a respiratory isolation room and ideally under negative pressure; positive pressure rooms must not be used, patient to minimise contact/exposure to staff and other patients, and ask the **patient to wear a surgical mask**
- restrict visitors

i) Actions for **health professionals** managing the case:

- ensure appropriate isolation and infection prevention and control measures including correct use of specific PPE as above
- discuss case with the Duty Microbiologist/Virologist at nearest [PHE Public Health Laboratory](#)
- if the PHL Duty Microbiologist agrees that testing is indicated, follow the [laboratory investigations algorithm](#) and inform the [local HPT](#)
- treat and investigate as clinically indicated

Start oseltamivir treatment if not already done so (do not wait for results of avian influenza diagnostic tests). For guidance on dosage refer to the [PHE guidance on use of antiviral agents for the treatment and prophylaxis of seasonal influenza](#).

The dosage information provided for treatment of seasonal influenza is appropriate for initiating treatment of avian influenza cases.

ii) Actions for **PHE Centre Health Protection Team:**

- complete [possible case report form 1a](#) and send to respiratory.lead@phe.gov.uk
- alert Colindale duty doctor for all persons being tested for avian influenza

ii) Actions for Colindale duty doctors:

Follow [avian influenza communication cascade](#) for incidents where a diagnosis of avian influenza is under consideration

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2) Results of testing

a. Testing result = H5/H7 NOT DETECTED (AND Influenza A detected, OR Influenza A detected and subtyped as seasonal H3N2 or (H1N1)pdm09 or Influenza B detected)

i) Actions **for clinical diagnostic testing laboratory:** [see laboratory guidance](#)

- PHL Duty Microbiologist/Virologist informs the local HPT, the referring laboratory, and the National Infections Service

ii) Actions for **PHE Centre Health Protection Team:**

- Local HPT informs National Infections Service (via respiratory.lead@phe.gov.uk if out of hours)

b. Testing result = H5 or H7 DETECTED (OR Influenza A detected but unsubtypeable and has relevant exposure for non-H5/H7 Avian Influenza)

Treat as a PRESUMPTIVE POSITIVE case.

i) Actions **for clinical diagnostic testing laboratory:** [see laboratory guidance](#)

- Duty Microbiologist/Virologist informs the local HPT, the referring laboratory, and the National Infections Service

ii) Actions for **PHE Centre Health Protection Team:**

- Local HPT informs National Infections Service, Colindale (or Colindale Duty Doctor at any time if out of hours)
- National Infections Service, Colindale follows [avian influenza communication cascade](#)
- PHE to establish Incident Management Team

3) Public health management of contacts of confirmed human cases of avian influenza

This table summarises recommendations for the management of contacts of presumptive positive/confirmed human cases of avian influenza who were exposed when the case was **symptomatic or 1 day before symptom onset**. This should only be initiated on the advice of a PHE-led incident management team, following receipt of presumptive positive/ confirmed laboratory results in the case.

Category of contact	Post-exposure chemoprophylaxis? (see next page for details)	Follow-up
Household contact (>15 minutes, face to face contact)	Yes	Active follow-up ³ for 10 days after last significant exposure
Healthcare workers and visitors to the hospital who <u>have not</u> worn recommended PPE during all exposures to the patient	Yes	Active follow-up for 10 days after last unprotected exposure
Healthcare workers who have worn recommended PPE during all exposures to the patient	No	Passive follow-up ⁴ for 10 days after last exposure
Other close contacts (based on a risk assessment, related to factors such as duration >15 minutes, face to face in a closed setting)	Yes	Active follow-up for 10 days after last unprotected exposure
Air travel (2 seats all around the index case)	Based on risk assessment by IMT	

³Active follow-up: Individual should be contacted on a daily basis, and asked about relevant symptoms.

⁴Passive follow-up: Individual is provided with health advice, and advised to contact the HPT if they develop relevant symptoms.

- individuals who do not satisfy the above categories for contact with a symptomatic confirmed human case of avian influenza should be reassured that they do not need antiviral post-exposure prophylaxis, follow-up or self-isolation
- advice to healthcare workers on exclusion from work will be determined by the IMT based on local situation
- pre-exposure chemoprophylaxis is not recommended for healthcare workers who will be caring for cases with appropriate PPE

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4) Guidance on post-exposure chemoprophylaxis of contacts

a. For H5N1/H5N6 and any other avian influenza associated with severe human disease

PHE advises post-exposure chemoprophylaxis for close contacts of presumptive positive/ confirmed cases of avian influenza according to the following schedule:

- start oseltamivir as soon as possible following exposure
- the dose of oral oseltamivir 75 mg once daily for 10 days (increasing dosage duration based on a clinical decision of risk)
- contacts should be monitored closely for signs of illness for up to 10 days following exposure and be managed as a possible case (as per possible case definition, above) if they develop compatible illness within this time period

For further guidance around the use of antivirals, see the [PHE guidance](#)

b. Specific guidance for avian influenza A(H7N9)

Resistance to neuraminidase inhibitors has been described for some avian influenza viruses, particularly H7N9. For people exposed to a confirmed case of H7N9, a Treatment dose of oseltamivir (twice daily dosing) is recommended to reduce the risk of emergence of antiviral resistance.

PHE advises chemoprophylaxis for close contacts of confirmed cases of A(H7N9) avian influenza along the following guidelines:

- start treatment as soon as possible following exposure
- a dose of 75mg oseltamivir twice daily for 5 days (increasing dosage duration based on a clinical decision of risk)
- contacts should be monitored closely for signs of illness for up to 10 days following exposure

This is based on virological evidence of oseltamivir resistance in cases of avian influenza A(H7N9), and is in line with [CDC](#) and [WHO](#) advice.