# Avian influenza in humans

## Australian national notifiable diseases case definition

This document contains the surveillance case definition for avian influenza in humans, which is nationally notifiable within Australia. State and territory health departments use this definition to decide whether to notify the Australian Centre for Disease Control of a case.

| Version | Status | Last reviewed | Implementation date |
|---|---|---|---|
| 2.0 | Change AI to avian influenza.<br>Addition of clarifying statement on the reporting of suspected cases.<br>Removal of the requirement for clinical evidence from Confirmed and Probable case definitions, with clinical evidence moved to Suspected case definition.<br>Review and update of clinical, epidemiological and laboratory evidence. | 1 July 2026 | 1 July 2026 |
| 1.0 | Initial case definition | 1 July 2015 | 1 July 2015 |

# Reporting

Both **confirmed cases** and **probable cases** should be notified. The suspected case definition has been retained in response to the emergence and global spread of avian influenza A(H5N1) clade 2.3.4.4b and the associated risk to human health. The suspected case definition may be discontinued as the epidemiological situation evolves. Suspected cases should not be notified to the National Notifiable Disease Surveillance System (NNDSS) but should be reported to state and territory public health units.

# Confirmed case

A confirmed case[1] requires **laboratory definitive evidence** only.

## Laboratory definitive evidence

Isolation of avian influenza A virus by culture.

OR

Detection of avian influenza virus by nucleic acid testing using two different targets specific to avian influenza virus.

OR

Detection of avian influenza by whole genome sequencing or partial genome sequencing that includes two genes specific to avian influenza virus.

OR

Seroconversion or a fourfold or greater rise in antibody titre to the avian influenza virus, demonstrated by paired sera, from an acute serum specimen collected 7 days or less after symptom onset and a convalescent specimen collected 3–4 weeks after symptom onset, tested in parallel.

***Note:***

i. Where feasible, during partial genome sequencing, at a minimum sub-typing of the hemagglutinin gene is strongly recommended for viral characterisation but is not required to fulfil the case definition.
ii. Australia maintains a network of reference-level laboratories with the capability to confirm and characterise highly pathogenic avian influenza virus infection in a human. Where testing cannot be performed in a timely manner by a reference-level laboratory, samples can be sent to the World Health Organization Collaborating Centre for Reference and Research on

[1] The Communicable Diseases Network of Australia (CDNA) surveillance case definitions for avian influenza in humans (confirmed, probable and suspected categories) and influenza (confirmed category) are intended to be mutually exclusive. A case (or single infection) in a person should not be notified to the NNDSS simultaneously for both conditions, where possible, unless a dual infection is confirmed.

Influenza (WHO CCRRI) for confirmation of subtype, whole genome sequencing, and a risk assessment can be performed.

iii. If testing confirms highly pathogenic avian influenza virus infection in a human, the virus is then considered a Security Sensitive Biological Agent (SSBA) and must be handled in accordance with requirements under the *National Health Security Act 2007, National Health Security Regulations 2018* and the SSBA Standards.

# Probable case

A probable case[2] requires **laboratory suggestive evidence** AND **epidemiological evidence.**

## Laboratory suggestive evidence

Isolation or detection of an influenza A virus suggestive of a non-seasonal influenza A subtype (e.g. negative for A(H1N1) and A(H3N2) targets), without meeting the laboratory definitive evidence for avian influenza virus, including where confirmatory testing is pending.

OR

Detection of a single high antibody titre, as defined by the testing laboratory, to the avian influenza virus, or to the subtype of avian influenza virus suspected of causing the human infection.

## Epidemiological evidence

One or more of the following exposures in the 10 days prior to symptom onset (or the 10 days prior to specimen collection for asymptomatic cases):

a. Contact with a person who has a probable or confirmed avian influenza virus infection, with the level of contact assessed as meeting one of the contact definitions outlined in the CDNA Series of National Guidelines (SoNG) for Avian Influenza in Humans. If contact is with a probable avian influenza case, there must be an epidemiological link to at least one confirmed avian influenza case in the chain of transmission.

b. Exposure to avian influenza-infected animals, animal products or contaminated environments, with exposure assessed as meeting the definition of one of the risk categories outlined in the CDNA SoNG for Avian Influenza in Humans.

c. Consumption of raw or undercooked poultry or other at-risk animal products (such as eggs or unpasteurised milk) from an area where avian influenza infections in animals or humans have been suspected or confirmed in the last month.

d. Handling of samples (animal or human) known or suspected to contain avian influenza virus in a laboratory or other setting without adequate personal protective equipment.

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# Suspected case

A suspected case[3] requires **clinical evidence** AND **epidemiological evidence**

## Clinical evidence

An acute illness characterised by one or more of the following:

a. fever (>38 ºC) or history of fever

b. eye redness and irritation (conjunctivitis)

c. one or more of: cough OR rhinorrhoea OR myalgia OR headache OR dyspnoea OR diarrhoea

c. infiltrates or evidence of an acute pneumonia on chest radiograph AND evidence of acute respiratory insufficiency (hypoxaemia, severe tachypnoea).

## Epidemiological evidence

As with **probable case.**

***Note:***

i. For overseas exposures, an avian influenza-affected area is defined as a region within a country with confirmed outbreaks of avian influenza strains in birds or non-avian animals (e.g. livestock, marsupials, marine mammals, domestic pets, or other mammals) or where avian influenza virus has been detected in humans in the last month. Information regarding countries where avian influenza has recently been detected in humans is available from the World Health Organization's *Influenza at the human-animal interface* summaries. Information regarding the status of avian influenza in animals is available from the World Organization for Animal Health's *Avian Influenza* situation reports.

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