NSW HEALTH

AVIAN INFLUENZA in humans
RESPONSE PROTOCOL FOR NSW PUBLIC HEALTH UNITS

Response summary

Public health priority
Urgent.

PHU response time
Respond to a suspected case immediately on notification. Report details of the case to Communicable Diseases Branch (CDB) on day of notification.

Case management
Suspected cases must be cared for in a single room. If identified within 48 hours of illness onset, cases should be treated with anti-influenza medications (neuraminidase inhibitors – oseltamivir and zanamivir).

Contact management
Contacts of suspected cases and infected birds must be rapidly identified, counselled about their risk, and placed under surveillance. The Avian Influenza Expert Panel will advise on the definition of exposed contacts, and those who require prophylaxis with anti-influenza medications (oseltamivir or zanamivir).

Note. This chapter is concerned with the public health response to people with suspected or confirmed avian influenza infection, and people who have been exposed to another person or to birds with avian influenza infection. It is not concerned with human pandemic influenza. The case definitions have been developed in relation to H5N1 avian influenza, and it is recognized these may need to change should a different strain of avian influenza emerge as a public health threat.

1 Reason for surveillance

- To rapidly identify, isolate, and treat cases.
- To rapidly identify contacts of cases and of infected birds so that they can be counselled, assessed, placed under surveillance, offered chemoprophylaxis with antiviral agents, and rapidly isolated should symptoms occur.
- To describe the epidemiology of avian influenza (AI) in humans in NSW.

2 Case definition

Suspected Case
A suspected case requires clinical evidence and epidemiological evidence.

Clinical evidence

Person with acute respiratory illness, characterized by fever (temperature >38^0C), cough, and fatigue.

Epidemiological evidence

Onset of symptoms within seven days of:

- contact with a confirmed human case of AI during the infectious period (i.e., one day before to 7 days after onset of AI illness (for children aged 12 years or less - one day before and 21 days after onset of illness))

  OR

- close contact with poultry, or with any dead birds where the cause of death is unknown, in an area known to have outbreaks of AI

  OR

- working in a laboratory that processed samples from persons or animals suspected of having AI infection.

Confirmed Case:
A confirmed case requires clinical evidence AND laboratory definitive evidence.

Laboratory definitive evidence

One or more of the following positive laboratory tests:

- Isolation of AI virus by culture from appropriate respiratory tract specimen, OR
- Detection of AI virus by nucleic acid testing from appropriate respiratory tract specimen, OR
- Detection of AI virus antigen from appropriate respiratory tract specimen, OR
- Immunofluorescence antibody (IFA) test positive using specific AI antiserum, OR
- Single high titre antibody to AI virus or a fourfold or greater rise in titre to AI virus.

Factors to be considered in case identification
In the unusual event that an AI strain transforms into one that is easily transmitted between humans, it is no longer avian influenza, but becomes human (and possibly pandemic) influenza. The response to human pandemic influenza is described in the national and state influenza pandemic management plans.

The evidence base for defining what constitutes "contact" with a human case is limited. For the purposes of the case definition, it is taken to mean being within one metre of an infectious case for any length of time, or the same room as an infectious case for at least one hour.

An AI-affected area is defined as a region within a country with confirmed outbreaks of AI strains as reported by the World Organization for Animal Health (OIE, http://www.oie.int/eng/en_index.htm). With respect to the H5N1 AI outbreak that commenced in Asia in 2003, information regarding A(H5)-affected countries is available at

http://www.who.int/csr/disease/avian_influenza/country/en/.
The case definition is based on available clinical, epidemiological and laboratory data and it should be recognised that it may be modified as a better understanding of the disease in humans unfolds.

Because of the current uncertainty about whether person-to-person transmission occurs, and the possibility that the AI strain could mutate in to a form that is more easily spread from person-to-person including via airborne spread, cases require airborne, droplet, contact and standard infection control precautions.

3 Notification criteria and procedure

Avian influenza in humans is notifiable by:

- medical practitioners and hospital CEOs
- laboratories.

It is recognised that the heightened awareness about AI should prompt clinicians to report cases to their local PHU for help in the triage and management of suspected AI cases.

PHUs should report suspected and confirmed cases to the Communicable Diseases Branch (CDB) by telephone immediately on notification.

In the event of AI being identified in NSW birds, the NSW Department of Primary Industries (DPI) will notify NSW Health, which will notify the relevant Public Health Unit.

4 The disease

Infectious agent

Avian influenza virus. All AI viruses are influenza A viruses and multiple subtypes of influenza are known to infect birds. AI viruses can have low or high pathogenicity in poultry - LPAI or HPAI. To date, only H5 and H7 varieties have been known to cause outbreaks of HPAI in birds although both LPAI and HPAI can rarely cause illness in humans following very close contact. It is believed that human pandemic influenza strains may mutate from AI viruses.

Mode of transmission

Infected birds shed virus in their saliva, nasal secretions, and faeces. Susceptible birds become infected when they have contact with contaminated excretions from infected birds or from contaminated surfaces or water. Transmission of infection from birds to humans is uncommon. When it has occurred, it is believed to have resulted from close contact with infected poultry or breathing in dust contaminated with their excretions. Although unequivocal evidence is lacking, it remains a possibility that a small number of human cases have occurred as a result of close and prolonged person-to-person transmission, the precise mode of which is unknown. The virus can survive on poultry products (including eggs and blood) but the risk of infection from these can be minimised by cooking the products, and regular hand-washing.

Timeline

Although the incubation period for avian influenza may vary with the subtype, the typical incubation period for influenza is 1–4 days, with an average of 2 days. Adults can be infectious from the day before symptoms begin through to approximately 5 days after illness onset. Children can be infectious for $\geq$ 10 days, and young children can shed virus for several days before their illness onset. Severely immunocompromised persons can shed virus for weeks or months.

Clinical presentation

The clinical presentation of AI in humans may vary with the virus subtype. All subtypes can cause symptoms typical of human influenza (fever, cough, fatigue, myalgia, sore throat, shortness of breath, runny nose, headache). The most common presentation of humans infected with H7 strains is conjunctivitis. The H5N1 subtype has caused viral pneumonia with a high mortality rate, and in small number of cases, an encephalitic or diarrhoeal presentation has been reported.

5 Managing single notifications

Response time

Investigation

Immediately on notification of a suspected case, begin follow up investigation and notify the CDB. The form "Avian Influenza (AI) in humans - Reporting Form" (see appendices) should be completed and faxed to CDB the same day.

Data entry

Within 1 working day of confirmation, enter confirmed case on NDD as **Disease:** influenza (avian); **Organism**: influenza virus; **Subtype:** (for example) H5N1.

Response procedure

The response to a notification will normally be carried out in collaboration with the case's health carers. Regardless of who does the follow-up, PHU staff should ensure that action has been taken to:

- confirm the onset date and symptoms of the illness
- confirm results of relevant pathology tests, or recommend that tests be done (the laboratory should be advised before sending the specimens)
- find out if the case or relevant care-giver has been told what the diagnosis is before beginning the interview
- seek the doctor's permission to contact the case or relevant care-giver
- review case and contact management
- ensure appropriate infection control professionals are notified and infection control policies are available to those caring for the case
- identify the likely source of infection.

Case management

Investigation

Obtain a travel history, and follow up clinical results and case details. See "Recommended samples for laboratory workup for suspected cases of avian influenza (AI)" (in appendices) for guidance on laboratory testing.

Note. If interviews with suspected cases are conducted face-to-face, the person conducting the interview must have a thorough understanding of infection control practices, be competent in using appropriate personal protective equipment (PPE), and ideally have been vaccinated with the current (human) influenza vaccine.

Treatment

The PHU must ensure that case management follows "Avian influenza (AI) in humans: Interim guidance for recognition, investigation and infection control" (in appendices).

Antiviral medications have been shown to attenuate disease in cases of human influenza if given early in the course of the illness (within 48 hours). They may also be effective for treating AI. The preferred agents are neuraminidase inhibitors (oseltamivir and zanamivir).

Education

Provide *Avian Influenza Fact Sheet* to cases and their close contacts. Ensure that they are aware of the signs and symptoms of AI, the requirements of isolation, contact details of the PHU and the infection control practices and precautions that can prevent the transmission of AI.

Isolation and restriction

Infectious cases must be isolated until no longer infectious (see section 4: Timeline). Advice from the facility's infection control professional should be sought. Health care workers and others who come into contact with the case must use airborne, droplet, contact and standard infection control precautions (plus eye protection if within 1m). The mode of transmission is unclear, but postulated to be mainly droplet and direct contact. However, the possibility of airborne transmission remains, and airborne precautions must be used.

If hospitalised, patients should be managed in a single room with airborne, droplet, contact and standard precautions and if available, a negative pressure room. Similarly, in a primary care setting such as a GP surgery, patient isolation and airborne, droplet, contact and standard infection control precautions should be employed. Cases may be managed at home only if the case and contacts are counselled about risk, infection control measures are made available and are in place, and a comprehensive discharge plan has been made by the treating hospital medical team in liaison with the PHU.

Environmental evaluation

Where local transmission of AI is thought possible, a thorough review of contributing environmental factors should be done. If transmission is thought to be poultry-related, the environmental assessment should include a review of opportunities for exposure to infected birds, in collaboration with DPI and WorkCover NSW. If health care-associated infection is suspected, the adequacy of infection control procedures must be reviewed.

Staff conducting the environmental evaluation must have a thorough understanding of infection control practices, be competent in using personal protective equipment (PPE), and have been vaccinated with the current (human) influenza vaccine. They must follow airborne, droplet, contact and standard infection control precautions, including appropriate PPE (gown, gloves, protective eyewear and P2 mask).

Contact management

Identification of contacts

AI is not easily transmitted between humans and the only reports to date where human-to-human transmission has been suggested has involved close and prolonged contact. Until more evidence emerges, the public health intervention will need to be carefully considered on a case-by-case basis. Following a report of any suspected case, the NSW AI Expert Panel will be convened by CDB to help plan the public health response, including identification of contacts.

Chemoprophylaxis

Antiviral medications may have efficacy in preventing diseases in contacts. Unless the available evidence clearly shows lack of efficacy, close contacts of confirmed cases should receive anti-influenza medication (neuraminidase inhibitors – oseltamivir and zanamivir) to prevent infection.

Education

Contacts should be counselled about their risk and the symptoms of AI and placed under surveillance (see "Avian influenza ("bird flu") advice for people under surveillance" in appendices). The PHU should ensure that contacts are contacted on a daily basis for 7 days to determine if symptoms of AI have developed. If symptoms develop, the PHU should arrange assessment by an appropriately qualified medical practitioner. This must take place in a setting where risk is managed through the use of appropriate infection control precautions.

Isolation and restriction

Contacts are not required to isolate themselves from the community but must adhere to advice regarding self-monitoring until the incubation period expires.

Symptomatic contacts must be rapidly isolated until AI is excluded.

6 Managing special situations

Where DPI reports an outbreak of AI in birds in NSW, the PHU has the responsibility of ensuring that the risk of human infection is minimised. The public health actions should be guided by the NSW AI Expert Panel, which will be convened by CDB in collaboration with the PHU. Issues to be addressed include:

- Working with DPI and WorkCover NSW to ensure that people entering the area deemed by DPI to harbour infection have been trained in the use of PPE, and use it where the potential for exposure to infected birds or the dust from infected birds is present.

- Providing oral and written information to people who were exposed to the infected birds about the risk of infection, the methods of minimising the risk, symptoms to be alert for, and to report to the PHU immediately, should symptoms occur.
- Assessing whether people who were exposed to infected birds require anti-influenza medicine, and if so arranging supply (via CDB) and administration of the medicine. Indications for anti-influenza medicines will be determined by the AI Expert Panel, and may be limited to persons with direct exposure to infected birds in the absence of appropriate PPE.
- Placing exposed people under surveillance for seven days as per Section 5. Should symptoms develop, the PHU should arrange for a medical assessment and diagnosis of the person.
- The local Health Service Functional Area Co-ordinator (HSFAC) can assist in logistic issues.

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Avian Influenza (AI) in Humans - Reporting Form

(to be completed for suspected and confirmed cases)

Unique Case Number (CDB to complete) ☐

What is the AI subtype (e.g., H5N1) ☐

Date form completed _____/_____/_____
Person completing form_____
Public health unit _____

Case details

Please fill in or circle where appropriate

Name Surname _____ First name _____
Sex M / F
DOB ___/___/____
Is this a new case notification? Y/N
Case type Suspected / Confirmed

Symptoms

Fever >38ºC Y / N / Unknown
Fever onset Date ___/___/___ Time_____
Onset of first symptoms Date ___/___/___ Time_____
Cough Y / N / Unknown If Yes, was it: (circle) Productive? Non-productive?
Difficulty breathing Y / N / Unknown
Headache Y / N / Unknown
Myalgia Y / N / Unknown
Rhinorrhoea (runny nose) Y / N / Unknown
Sore throat Y / N / Unknown
Rigors Y / N / Unknown
Vomiting Y / N / Unknown
Diarrhoea Y / N / Unknown
Conjunctivitis Y / N / Unknown
Confusion Y / N / Unknown
Other symptoms Y / N / Unknown Details_____
CXR performed? Y / N / Unknown If Yes, date performed ___/___/_____
Description of CXR findings:
Other abnormal findings (e.g., white cell count, liver function) _____
_____

Exposure History (tick appropriate box)

Contact with an infectious case of AI in 7 days prior to onset. ☐

Date of last contact with a case? ___/___/_____

Provide details of contact (name, relationship to that person, dates, duration, closeness of contact)
_____
_____

Contact with poultry, or with dead birds other than poultry where the cause of death is unknown, in an area known to have outbreaks of AI in 7 days before symptoms. ☐
(provide details on the *Travel history* form below)

Working in a laboratory that processed samples from persons or animals suspected of having AI infection. ☐ **Date of last contact with such samples? ___/___/_____**

Travel history

1. ITINERARY

Please supply an itinerary of travel from 1 week prior to symptom onset to the present. Include visits to both AI-affected and AI-unaffected countries, dates of arrival and departure for each, and flight numbers.

Country visited	Date and time of arrival	Flight carrier and number	Date and time of departure	Flight carrier and number

2. DETAILED HISTORY OF TRAVEL TO AI-AFFECTED COUNTRIES

Complete a separate page for each AI-affected country visited.

Name of country _____ **Was it a transit?** Yes / No

If in transit, please specify details

Airport transit date/s transit time *(hrs)*

_____ _____ _____

Did the case leave the airport during transit? Yes / No

Did the case travel within the country? Yes / No

If Yes

Detail all places visited

Name of place visited	Contact with poultry* (Y/N/U)	Type of poultry contact*	Date(s) of poultry contact

*****e.g., , visit to poultry market or poultry farm, residing in a village with large numbers of poultry, travelling on public transport with poultry

Reason for visit: **Business** Yes / No **Holiday** Yes / No **Visit family/friends** Yes / No

Other (specify)_____

If holiday, was the case on a tour? Yes / No ***If Yes*, name of tour and tour company?** _____

Dates travelled on tour? _____ to _____

Other countries visited on tour? _____

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Hospital admission history (in Australia)

Hospitalised Y / N / Unknown

Hospital name _____

Date admitted ___/___/___

Date discharged ___/___/___

Treating doctor Name _____ Position _____

Contact number _____

Isolation Y / N / Unknown

If Yes, dates of period of isolation ___/___/_____ to ___/___/_____

ICU admission Y / N / Unknown

If Yes, dates of ICU stay ___/___/_____ to ___/___/_____

Mechanical ventilation Y / N / Unknown

Co-morbidities Y / N / Unknown *if Yes, specify* _____

Vaccination history

Previous vaccination against influenza? Yes / No / Unknown **If yes, most recent year?** _____

Previous vaccination against pneumococcus? **If yes, most recent year?** _____

Treatment Details

Antibiotics (please list) _____

_____

Antivirals (please list) _____

_____

Other (please list) _____

_____

Outcome (circle all that apply)

Case confirmed as AI Yes / No

Alternative diagnosis made? Yes / No *if Yes, specify* _____

_____

If yes, was there supporting microbiological evidence? Yes / No / Unknown

Details: _____

_____

Case recovered Yes / No / Unknown

Case died? Yes / No / Unknown

If yes, was an autopsy conducted? Yes / No / Unknown If Yes, results _____

_____

_____

Notes _____

_____

_____

_____

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Recommended samples for microbiological workup for suspected cases of avian influenza (AI)

- In addition to sampling for microbiology testing, a full blood count (FBC), urea/electrolytes (UEC), and liver function tests (LFT) should be taken at presentation and as appropriate.
- Routine microbiology tests should be conducted by the usual laboratory
- Nasopharyngeal and throat swabs may induce coughing and should preferably be collected in a negative pressure room, if available, by HCWs wearing full PPE. Write on specimen forms and containers before entering the patient's room to collect the specimens.
- Tests for AI (and SARS if applicable) are to be sent to a reference laboratory
- Specimens should be clearly marked SUSPECTED AVIAN INFLUENZA (and SARS if applicable) to ensure prioritisation by the laboratory.
- Specimens must be enclosed in a leak proof container with a secure closure. The container must be placed in an appropriate biohazard bag with the biohazard symbol displayed. Specimens should not be transported in a pneumatic tube system.
- Tests for severe acute respiratory syndrome (SARS) should only be considered if there have been recent confirmed reports of SARS activity. Refer to NSW Health SARS management guidelines at http://www.health.nsw.gov.au/infect/pdf/sars.pdf.

RESPIRATORY TRACT SAMPLES

1. Combined nose and throat swabs (usually for adults) or nasopharyngeal aspirates (NPA) (usually for children)

Specimen Collection

- Two sets at presentation recommended (one to go to AI reference laboratory)
- Send in viral transport media (VTM)

Tests

- Viral culture and immunofluorescence (IF)/ PCR for influenza A and B, parainfluenza 1-3, RSV, adenovirus, human metapneumovirus, rhinovirus, enterovirus, human coronavirus
- PCR for *Chlamydophila pneumoniae* and *Mycoplasma pneumoniae* can be performed on dry swabs (i.e., not VTM)
- Routine bacterial and fungal culture (will need separate bacterial swabs)
- PCR and/or IF for AI strain of interest if tests for influenza A are positive

2. Sputum and/or bronchoalveolar samples

Specimen Collection

- Bronchoalveolar samples will only be available in certain clinical settings (e.g., in ventilated patients or when bronchoscopy carried out)

Tests

- Routine Gram stain and bacterial/fungal/viral culture, including TB if indicated.
- *Legionella* culture

SEROLOGY

Specimen Collection

- Collect two10ml serum tubes (one for AI reference laboratory)
- Take samples at presentation and > 21 days after symptom onset

Tests

- Influenza A and B, parainfluenza 1-3, RSV, adenovirus, *Chlamydophila psittaci*, *Chlamydophila pneumoniae*, *Mycoplasma pneumoniae*, *Legionella pneumophila*, *Coxiella burnetii* (Q fever) depending on clinical details

URINE

Tests

- *Legionella pneumophila* type 1 antigen

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Details of laboratory test results for suspected cases of avian influenza

Laboratory Tests	Date	Results	Date	Results	Date	Results	Date	Results
Respiratory Tract Samples (indicate type of test e.g., culture, PCR, immunoflourescence(IF))								
Nose/throat swabs or naso-pharyngeal aspirates								
Influenza A/B								
Influenza A subtype								
Parainfluenza 1-3								
RSV								
Adenovirus								
Human metapneumovirus								
Rhinovirus								
Enterovirus								
Human coronavirus								
Chlamydophila pneumoniae PCR								
Mycoplasma pneumoniae PCR								
SARS coronavirus								
Bacterial culture								
Fungal culture								
Other								
Sputum, throat washes, bronchoalveolar fluid								
Mycoplasma pneumoniae								
Chlamydophila pneumoniae								
Legionella culture								
Viral culture								
Gram stain								
Bacterial culture								
Fungal culture								
Other								

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Details of laboratory test results for suspected cases of avian influenza (cont.)

Laboratory tests	Date	Results	Date	Results	Date	Results	Date	Results
Serology								
Influenza A/B								
Legionella sp								
Coxiella burnetii (Q fever)								
Chlamydophila pneumoniae								
Chlamydophila psittaci								
Mycoplasma pneumoniae								
SARS coronavirus								
Other (*specify*)								
Faeces and Urine (indicate type of test e.g., culture, PCR, immunoflourescence)								
Legionella pneumophila 1 (urine)								
SARS coronavirus (faeces)								
Other (*specify*)								
Haematology, Biochemistry								
WCC ($x10^9$/L)								
Lymphocytes ($x10^9$/L)								
Neutrophils ($x10^9$/L)								
Platelets ($x10^9$/L)								
ALT (U/L)								
AST (U/L)								
LDH (U/L)								
CK (U/L)								
Other (*specify*)								

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Avian Influenza ("Bird Flu") Advice For People Under Surveillance.

What is meant by being "under surveillance"?

Because you have been exposed to a person suspected of having avian influenza, there is a small risk that you will also develop the illness. Your health needs to be closely monitored until the risk period is over. Staff from your local Public Health Unit will contact you daily to check on your health. As long as you remain free of symptoms, you do not need to be isolated from the community and may continue your normal daily activities, including work.

What do I have to do?

You are required to monitor your health for 7 days after you were last exposed to a person with avian influenza. You must:

- measure your body temperature every morning at 10:00 am, and record it in the table provided
- watch out for any symptoms (see box over page)
- If you develop a temperature greater than 37.5^{o}C or any symptoms:
    - isolate yourself from other people and seek medical attention (phone ahead first)
    - contact the Public Health Unit.

You and others in your household need to be careful with hygiene and thoroughly wash your hands with soap and running water for 10 seconds (or using alcohol-based hand rubs), especially after contact with secretions from your nose and mouth, (e.g., after blowing your nose, coughing, or sneezing), before eating, or after using the toilet.

Date of last contact with an avian influenza case: _____

Monitor health until: _____

How to record you body temperature. Follow these instructions carefully.

To ensure accurate measurement of your temperature, **do not** take your temperature for 30 minutes after:

- having a hot or cold drink,
- having a hot shower or bath
- exercising
- smoking.

Take your temperature before taking medications that lower your temperature (e.g., aspirin, ibuprofen, and paracetamol-containing drugs such as Panadol, Panadeine, Dymadon). Wait for 4 hours before taking your temperature if you have taken these medications.

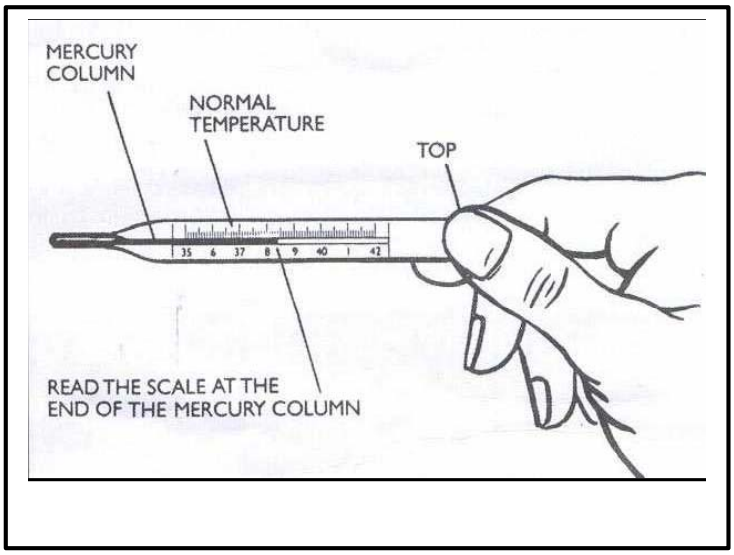
<u>Using a digital thermometer</u>: (see opposite)

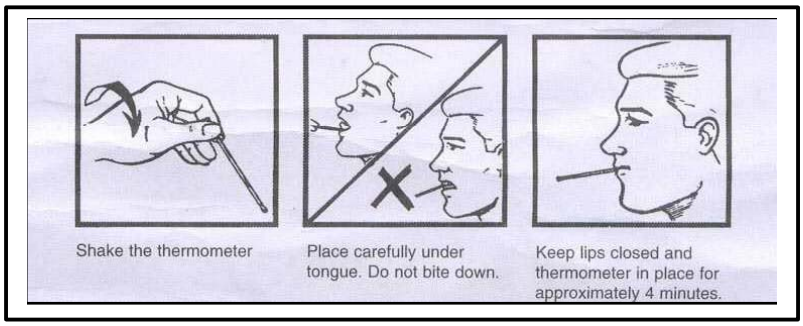
- Press on/off button
- Wait until thermometer resets and beeps
- Place tip of the thermometer under the tongue or in the ear (according to the type)
- Wait until the thermometer beeps
- Record the temperature and the time it was taken
- Contact the Public Health Unit if your temperature
- is higher than 37.5^{o}C.
- Consult the manufacturer's instructions for advice on cleaning the digital thermometer.

<u>Using a mercury thermometer</u>: (see overleaf)

- Hold the thermometer firmly by the top and shake downwards firmly
- Shake the thermometer until the mercury level falls below 35ºC
- Place the thermometer bulb under the tongue and leave in place for 4 minutes (monitor with a clock). Do not bite or knock the thermometer. For some (e.g., children) it may be easier and safer to place the thermometer under their arm
- Record the temperature and the time it was taken
- After use wash the thermometer in water and detergent.

Using a mercury thermometer (cont.)





Symptoms of avian influenza in humans and what to do if you get them

Symptoms include fever **and** cough, severe fatigue, headache, sore throat, runny nose, muscle/joint aches, shortness of breath and inflamed eyes.

If you do develop a fever greater than 37.5^{o}C or start to feel unwell with any of these symptoms:

- isolate yourself from other people, and seek medical attention (phone ahead first)
- make sure all household members continue very good hygiene practices, especially regular hand-washing.
- contact the _____ Public Health Unit on _____ (BH) and _____ (AH)

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Table for recording temperature and symptoms

(Record for 7 days)

Name _____ Monitor temperature until __/__/__

Day	Date	Time temperature taken	Temperature	Symptoms, if any
1				
2				
3				
4				
5				
6				
7				

NSW HEALTH

Avian influenza (AI) in humans

Interim guidance for health care workers in recognition, investigation and infection control

1. Screening

SCREENING MAY OCCUR AT HOSPITAL TRIAGE STATION OR AT A GP SURGERY, BY TELEPHONE OR IN PERSON.

If the initial screening was done by phone, and it was positive, the patient should be advised to go to an emergency department, which will need to be forewarned.

Fever ≥ 38°C (or history of fever) PLUS cough PLUS one or more other influenza-like illness (ILI) symptoms:

- fatigue
- headache
- shortness of breath.
- myalgia
- sore throat

AND

Travel to an AI-affected area* within 7 days of onset of symptoms where the patient:

EITHER

- had contact with poultry, or with dead birds other than poultry where the cause of death is unknown OR
- had close contact with a suspected or known case of AI OR
- is a laboratory worker with potential exposure to clinical samples containing AI virus.

*A list of AI-affected countries can be found at http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm

YES

NO

Unlikely to be AI – no special requirements.

2. Inform

Inform:
- your local Public Health Unit (PHU) (see list over page)
- Infectious Diseases Physician
- hospital infection control professional.

3. Infection Control Precautions

Person-to-person spread of AI, if it occurs at all, is thought to require very close and prolonged contact. **However standard, contact, droplet and airborne precautions must be employed until a diagnosis of AI is excluded, or the period of infectiousness of a confirmed case has lapsed.**

HOSPITAL

Location: Single room (with negative pressure if available).
Patient to wear surgical mask (if leaves the single room).
Staff to wear P2 (N95) mask, long-sleeved gown and gloves (and eye protection if within 1m of patient).

PRIMARY CARE OR COMMUNITY SETTING

Location: Isolate from other patients; separate room if at home
Patient to wear surgical mask (if leaves the room).
Staff and carers, when in the room, to wear P2 (N95) mask, long-sleeved gown and gloves (and eye protection if within 1m of patient).

4. Investigations

- Organise chest X-ray and collect routine blood specimens (e.g., FBC, EUC, LFT).
- Phone on-call microbiologist immediately to organise laboratory tests, specimen handling and transport.
- Collect
  - appropriate respiratory tract specimens* e.g., naso-pharyngeal aspirate (NPA), nose/throat swabs (NTS), sputum
  - blood for culture and serology (including atypical pneumonia pathogens)
  - consider point-of-care test for influenza (note that a negative point-of-care test for influenza does not exclude the disease due to low sensitivity of the test).
- Indicate clearly on the request form that AI is being considered in the differential diagnosis.
- Routine tests should be conducted by usual laboratory; PCR for AI to be sent to reference laboratory (a separate NPA for NTS specimen should be taken for this test).

*NPA and NTS should preferably be collected in a negative pressure room, if available.

DEPENDING ON CLINICAL SEVERITY, ADMIT OR DISCHARGE HOME

If discharged, clinical team to liaise with PHU to ensure:
- patient and carers understand treatment, infection control and surveillance requirements
- test results are followed up
- patient is followed up in 48-72 hours to confirm recovery.

No alternative diagnosis | Alternative diagnosis | AI confirmed

5. Reassessment

- Check test results that remain outstanding (note that some true cases of AI will be negative on initial laboratory testing).
- If alternative diagnosis made, ensure no co-infection with AI.
- Within 48 hours, clinical team to liaise with local PHU to decide if AI can be excluded and if case removed from isolation. If unsure, advice from the NSW AI Expert Panel can be sought.

Public Health Units in NSW

Metropolitan Areas			Rural Areas		
Northern Sydney / Central Coast	Hornsby	02 9477 9400	**Greater Southern**	Goulburn	02 4824 1837
	Gosford	02 4349 4845		Albury	02 6021 4799
South Eastern Sydney / Illawarra	Randwick	02 9382 8333	**Greater Western**	Broken Hill	08 8080 1499
	Wollongong	02 4221 6700		Dubbo	02 6841 5569
Sydney South West	Camperdown	02 9515 9420		Bathurst	02 6339 5601
	Liverpool	02 9828 5944	**Hunter / New England**	Newcastle	02 4924 6477
Sydney West	Penrith	02 4734 2022		Tamworth	02 6767 8630
	Parramatta	02 9840 3603	**North Coast**	Port Macquarie	02 6588 2750
Justice Health Service	Matraville	02 9289 2993		Lismore	02 6620 7500
NSW Department of Health	Nth Sydney	02 9391 9000			
NSW Health website	www.health.nsw.gov.au				

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