



# Influenza & Pandemic





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In the CFA you respond to requests for assistance that may involve person to person contact with members of the public, victims and other emergency service workers. This contact under normal conditions would not be seen as an issue, but if a pandemic was to occur this contact may pose a problem for all emergency service workers. The CFA, along with other Victorian Emergency Services have developed a plan to maintain capability to respond to requests for assistance and conduct daily business.

If the situation should arise, the CFA has secured Personal Protective Equipment (PPE) for all members which will be made available as required. The PPE purchased are the same as items used on the fireground in everyday operations.

This information package has been developed due to the current global Avian Flu situation, with the possibility that this current strain may mutate into a new Influenza virus that may trigger a human Influenza Pandemic worldwide.

The contents of this information package has been sourced from a number of state and federal documents to provide the reader with an understanding of the virus and simple techniques to prevent it's spread. In the unlikely event that the Bird Flu Influenza Strain (H5N1) mutates in to an Influenza Strain that can be transmitted from Human to Human it's important to note that hygiene is one of the most effective practices to protect you.

Further information is available from the Department of Health and Aging Website.

June 2006

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## How are avian, pandemic, and seasonal flu different?

**Seasonal flu** is a contagious respiratory illness caused by influenza viruses.

**Pandemic flu** is flu that causes a global outbreak, or pandemic, of serious illness that spreads easily from person to person. Currently there is no pandemic flu.

**Avian flu** is caused by avian influenza viruses, which occur naturally among birds.

## What is Influenza?

Influenza, commonly called 'the flu', is an infection of the nose, throat and lungs caused by the influenza virus.

## How does it spread?

Influenza is very infectious. It can spread from person-to-person by respiratory secretions in three ways:

- Through spread of droplets from person to another (for example coughing, sneezing)
- By touching things that are contaminated by respiratory secretions and then touching your mouth, eye or nose
- Through spread of particles in the air in crowded populations in enclosed spaces

## What are the symptoms?

The symptoms of the seasonal flu include fever, headache, tiredness, dry cough, sore throat, runny or stuffy nose and muscle aches. Children can have additional gastro-intestinal symptoms, such as nausea, vomiting, and diarrhoea, but these symptoms are uncommon in adults.

## If I were exposed to influenza, how long would it take for me to get sick?

The incubation period varies from 1-7 days. Maximum infectiousness usually occurs from one day before onset of symptoms to three days after. Most symptoms resolve within 2-7 days, although the cough may persist longer.



## If I have influenza, how long will I be infectious for?

The infectious period is usually from the onset of illness to seven days after the resolution of fever. In children aged 12 years or less the infectious period is longer - a maximum of 21 days after the onset of illness. A small proportion of patients may be infectious from just before symptoms appear.

## What is pandemic influenza?

Pandemic influenza involves significant genetic variation in the influenza virus resulting in a new virus subtype. When this occurs, most people will be susceptible to the new subtype. Factors that influence the likelihood of a pandemic influenza include:

- the emergence of a new viral subtype;
- the capacity for the virus to spread efficiently from person to person;
- and being virulent enough to cause the disease.

## What is avian influenza (bird flu) and is it going to cause a flu pandemic?

Avian influenza is an infectious disease of birds caused by specific type A strains of the influenza virus. There have been a number of outbreaks in Asia recently and smaller incidents of isolated cases in Europe. The European cases have been restricted to domestic bird stocks so far.

There have also been some cases of people catching avian influenza as a result of close contact with sick poultry (chickens). It is also possible to contract the virus from under cooked bird meats. To date, it has not spread easily between humans. Influenza viruses evolve rapidly and there is a risk that the virus could undergo genetic changes making it able to spread easily by air borne particles from person to person. If these changes occur, then it could cause a pandemic.

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## What is the current level of threat of a pandemic in the world?

Authorities are closely monitoring the avian influenza outbreaks overseas. Although there have been human avian influenza cases overseas, the infection is still limited and doesn't appear to be readily passing from human to human.

For a pandemic to occur, there needs to be a new strain of influenza. This can happen in one of two ways -

- When an animal influenza virus alters its genetic structure to enable it to infect humans and spread from person-to-person, or,
- When a current human influenza strain undergoes a mutation; neither of these has happened to date.

## Who is at risk from pandemic flu?

If a pandemic flu virus emerges, it will be a new one that the entire population has no immunity to. Therefore, potentially all age groups will be at risk, but it is difficult to predict in advance who will be most severely affected. Previous pandemics have affected different age groups and have had varying morbidity and mortality rates.

## Can pandemic flu kill people?

Yes, however, there are treatments available and ways to prevent infection from occurring in the first place. Victoria has strategies in place to reduce the spread and impact of the pandemic in the population.

## What are the complications?

Some of the complications caused by flu include bacterial pneumonia, dehydration, and worsening of chronic medical conditions, such as heart disease, asthma, or diabetes. Children may get sinus problems and ear infections as complications from the flu.

Those aged 65 years and older and persons of any age with chronic medical conditions are at highest risk for serious complications of flu.

## Do mass gatherings (concerts, sports matches, use of public transport etc) have the capacity to spread influenza?

Yes, mass gatherings do have the capacity to spread influenza among participants and during a pandemic their cancellation may need to be considered at the time. If you are feeling unwell stay home and if you are at a mass gathering avoid close contact with people who are sick (see below).

## Is pandemic flu a quarantinable disease?

Yes, Highly pathogenic avian influenza affecting humans was made a quarantinable disease in March 2004.

## If I get pandemic flu will I be put into quarantine?

Depending upon the severity of diseases, people who have symptoms of pandemic flu will be advised to stay at home or will be cared for in hospital (in isolation from other patients without pandemic flu). Depending on the timing and severity of the pandemic outbreaks, quarantining of contacts (that is family or friends) of pandemic influenza patients may occur, usually in the home.

Quarantine or isolation measures may be used to help stop pandemic flu coming into Australia, as well as keeping it contained in the event the pandemic has arrived in this country.

## How long will people be quarantined for?

Based on the current avian flu strains, individuals may be quarantined for 7-10 days. This will need to be reviewed according to the characteristics of the pandemic virus itself.

## Contact a doctor as soon as possible if you have symptoms of influenza and any of the following:

- Aged 65 and over
- Pregnant
- Have a chronic condition such as:
  - Asthma, severe enough to need oral steroids, or to have been in hospital or to a hospital emergency department
  - Emphysema or chronic obstructive airways disease
  - Diabetes (unstable diabetes needing hospitalisation, or diabetes requiring insulin)
  - Heart failure
  - Organ transplant (kidney, liver, lung, heart)
- Traveled to countries affected with avian influenza within the last 7 days
- Have a rash.

*When attending a medical practice, alert the receptionist to your symptoms so you can be seated away from others and possibly be given a surgical mask.*

## Look after yourself

- Get plenty of rest
- Drink plenty of fluids
- For aches and pains, use paracetamol regularly as per instructions
- Keep taking your usual medications (for example for high blood pressure, heart condition, asthma, diabetes), and follow the management plan for these conditions
- Avoid aspirin if you are aged 15 or younger, or if you take the drug Warfarin

## **PROTECTING YOURSELF AGAINST THE BIRD FLU.**

### Prevention and control

#### Is there a vaccine that can prevent pandemic influenza?

The current influenza vaccines will not protect humans against bird flu. **However, people who may be exposed to bird flu should consider being vaccinated against human influenza viruses to reduce the risk of the viruses 'mixing' to form a new flu strain.**

However in the lead up to a pandemic, it will still be important to vaccinate high risk groups against any seasonal strains of flu which are currently circulating. The pneumococcal vaccine is also important for the elderly, as it can prevent secondary bacterial pneumonia, caused by the pneumococcal bacteria.

Your GP can give you further information about these vaccines and there is further information on the Victorian Government website

#### How can I best protect myself from catching Influenza?

##### **Avoid close contact**

- Avoid close contact with people who are sick.

##### **Stay home when you are sick**

- Do not go to work, school or shopping

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### **When you are sick.**

- Do not share eating or drinking utensils (for example cups, cutlery).
- Don't get too close to uninfected friends and relatives.

### **Cover your mouth and nose**

- Cover your mouth and nose with a tissue when coughing or sneezing, dispose of the tissues afterwards and wash your hands after disposal of the tissues.

### **General Hygiene and Infection Control**

Everyone should be aware of the basic hygiene techniques and principles for protection against respiratory pathogens. This applies both in the workforce and outside work, and is relevant to the whole community. The principles of infection control and the management of infectious cases of pandemic influenza and their contacts is determined by the mode of transmission, the incubation period and the infectious period.

### **General Advice for prevention of influenza transmission**

This is relevant to everybody, including people who have symptoms. The mainstay of avoiding infection is in the avoidance of being exposed to droplets (coughs and sneezes of an infected person), dirty hands and exposed surfaces that have droplets on them.

## Protecting Yourself and Others Against Respiratory Illness

- Hand washing is one of the most important measures to prevent the spread of infection
- Anyone with respiratory-type illness should be careful with secretions from the nose and mouth
- Cover the nose and mouth when coughing or sneezing - use a tissue and dispose of this once used in the waste
- Always wash hands after having any contact with respiratory secretions
- Be careful with respiratory secretions (eg coughing and sneezing) when around other people. It may be best to avoid contact with individuals at risk (small children or those with underlying or chronic illnesses such as immune-suppression or lung disease) until respiratory symptoms have resolved
- Avoid contact with secretions of people who have respiratory illnesses
- Ask people to use a tissue and cover their nose and mouth when coughing or sneezing

## CLEANING AND DISINFECTION

**Cleaning and disinfection is also important for surfaces that can be coughed or sneezed on, or handled by the public.** The H5N1 influenza virus is inactivated by alcohol and by chlorine. Cleaning of environmental surfaces with a neutral detergent followed by a disinfectant solution is recommended.

### Masks and hand wash

P2 (N95) masks are expected to minimise air-borne and droplet transmission of respiratory secretions from an infectious case to the attending person. If used, they should be properly fit tested. They are potentially uncomfortable to wear, so a proper fit is very important. Members who may have exposure to the public during a pandemic should wear a P2 (N95) mask (CFA currently use this mask on the fireground).



Surgical masks are not as protective but are expected to minimise droplet transmission of respiratory secretions from an infectious case to other close contacts. Unless it needs to be removed for examination purposes, the ill person should wear a surgical mask to minimise exhalation of respiratory secretions when other people are within 1 metre or are in the same room. People with coughs and sneezes in public areas should be encouraged to wear a surgical mask during a pandemic.



Hand washing is an important preventive measure for respiratory disease, and soap and water and proper drying is recommended. Antibacterial hand cleansing gel is also useful, especially where ordinary washing is not available.

## General advice on preventing Avian influenza

People in areas where avian influenza is active amongst birds, should take precautions to avoid transmission of avian influenza. The following strategies are important:

- Avoid all direct contact with poultry (chickens, ducks, geese) and wild birds, even if the animals appear to be well. Avoid farms and live-animal markets.
- Avoid touching surfaces contaminated with poultry faeces or secretions, and avoid contact with fertilizers made from poultry faeces.
- Avoid swimming in water bodies where wild and domestic birds gather.
- Do not eat undercooked poultry meat/organs/blood. The cooking temperature for poultry meat should reach 70 C. Do not place cooked meat on the same surface it was on before it was cooked.
- Do not eat undercooked eggs. Egg yolks should not be runny or liquid, and raw or soft boiled eggs should not be used in foods that will not be cooked. Wash egg shells in soapy water before handling and cooking, and wash your hands afterwards.
- Hand hygiene with frequent hand washing using soap and water (or alcohol hand rubs) is good practice for prevention of many infectious diseases, including avian influenza. Wash hands after handling all raw or cooked foods.
- If you think you have been exposed to avian influenza, monitor your health for 10 days. Consult a health care provider if you become ill with fever and respiratory symptoms within 10 days of returning from an affected area.

## Selective Social Distancing

During a pandemic of influenza, measures to increase the separation of people (social distance), and restrict mass gatherings may be instituted or recommended. These measures, which include closure of schools and restricting gatherings such as concerts or sports events, are intended to prevent transmission of influenza between people. In the setting of influenza, as people may be infectious before the onset of symptoms, measures that reduce contact between people regardless of symptom status may be particularly effective.

World Health Organisation has recommended that authorities consider all measures to prevent spread of disease depending upon the characteristics of the particular pandemic strain, and the feasibility of the interventions, given their significant social and economic implications. So exactly what functions might get closed is not known at this time. It is possible that some public transport and non-essential business will be recommended to close.

It may be that businesses that include gatherings of people in the course of their work, eg markets, entertainment, sport, public transport, etc, will be required to close those operations.

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## References:

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- **Department of Human Services:**  
<http://www.health.vic.gov.au/avian/>
- **Australian Government Department of Health and Ageing:**  
[http://www.health.gov.au/avian\\_influenza/index.htm](http://www.health.gov.au/avian_influenza/index.htm)
- **Department of Foreign Affairs and Trade:**  
<http://www.dfat.gov.au/>
- **World Health Organization:**  
[http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)
- **Centres for Disease Control and Prevention (USA):**  
<http://www.cdc.gov/flu/>
- **Dr M Sargent,**  
Public Health Management  
Pty Ltd
- **CFA Brigades online/intranet**

