

Auckland Regional Public Health Service

Rātonga Hauora ā Iwi o Tamaki Makaurau



Working with the people of Auckland, Counties Manukau and Waitemata

Border Health Matters

This publication has been circulated in response to increasing concern about Avian Influenza cases occurring in Asia. Its purpose is to provide information to border workers about influenza pandemics, respond to some of their frequently asked questions and to advise them on routine methods to better prevent infection in the everyday working environment.

'Border Health Matters' will initially be an occasional publication, however, if the level of pandemic alert changes or other issues arise, further information will be provided.

Q. What is influenza and what are its symptoms?

Influenza (the flu) is a highly infectious illness caused by a virus. It is much more serious than a common cold and will leave you ill for up to 10 days.

Symptoms of influenza start suddenly and include:

- sudden onset of a high fever
- headache
- muscle aches and pains
- extreme tiredness
- cough
- sore throat
- runny nose

Influenza can be a mild or severe illness depending on the type of influenza virus causing it, and the age and general health of the person affected. It may take up to three days to show symptoms when you catch the flu. Anyone can get influenza — being fit, active and healthy does not protect you from getting this virus.

Q. What is the difference between pandemic and seasonal influenza?

Each year, usually in winter we experience an increase in influenza over the winter months called 'seasonal' influenza. The strains of influenza causing seasonal influenza are usually those that cause illness in the northern hemisphere during their winter. This allows us to develop and use vaccinations in autumn against these strains for those in New Zealand at high risk of catching influenza. Seasonal influenza kills at least 100 New Zealanders every year, including some young, fit people.

The symptoms of pandemic influenza are the same as seasonal influenza although a pandemic may cause severe more disease with many deaths. It could occur at any time of the year, not just over winter.

Q. Why do pandemics occur?

An influenza pandemic occurs when a new strain of influenza virus emerges, spreading around the world rapidly and infecting many people by spreading from person to person in a short period of time.

Q. How often do pandemics occur?

There were three influenza pandemics last century, in 1918, 1956-57 and 1968.

Q. What caused the three pandemics?

All three pandemics last century were caused by different types of Influenza A (H1N1, H2N2, H3N2). In all three, birds appeared to have been infected with the virus before person to person spread began.

Q. How is pandemic influenza transmitted?

Human influenza is transmitted from person to person by large droplets carrying influenza virus which are generated when an infected person coughs or sneezes. These droplets can then be directly deposited onto the surfaces of the eyes, nose and throat of those who are near the infected person (i.e. within 1 metre).

Transmission may also occur through direct contact with infectious (wet) respiratory secretions on surfaces in the everyday environment.

Q. What is avian influenza ('bird flu')?

There are many types of influenza virus, some of which infect animals such as birds. The viruses that infect birds are avian influenza viruses. Very rarely, an avian influenza virus can also infect people. One of these viruses - H5N1- has infected some people in close contact with infected birds.

Avian influenza can cause severe flu-like symptoms in people and may result in death. Symptoms generally appear three to seven days after exposure and can last up to seven days. It has not been shown for sure that anyone has caught avian influenza from another person.

There are currently no commercially available vaccines that will protect people against disease caused by the H5N1 avian influenza strain.

Q. What is my current risk of catching avian influenza?

The risk is negligible at present. While there is concern about the possibility of the virus that causes avian influenza mutating (changing its genetic makeup) so that it can be transmitted from person to person, there is no evidence that this has occurred to date.

The risk of those living in New Zealand catching avian influenza is negligible.

Even tourists visiting countries where Avian Influenza exists in poultry (Cambodia, China, Indonesia, Japan, Kazakhstan, Korea, Laos, Malaysia, Mongolia, Russia, Thailand, Vietnam, Turkey, Romania, Greece) are currently only at risk of infection if they:

- Have direct contact with poultry, including touching apparently well, sick, or dead chickens and ducks.
- Have direct contact with environments contaminated with poultry droppings or secretions

Q. Can influenza spread through air conditioning systems on aircraft or in buildings?

No, provided the air conditioning system is of good design and properly maintained.

Influenza is spread by large and small droplets, i.e. by close exposure to an infected person who is coughing and sneezing or those touching surfaces where there are wet respiratory secretions. There is no current scientific evidence that influenza can be spread by air conditioning units that are well designed and maintained, including those on international aircraft. However, there is evidence that it can spread within a small enclosed space with stagnant air, for example an aircraft without a functioning ventilation or air conditioning system.

The Ministry of Health and the Department of Labour recommend that all enclosed spaces are adequately ventilated to reduce the risk of droplet spread. If air-conditioning units are used to provide such ventilation, rather than open windows, then these units must be properly designed and maintained to the appropriate standards.

As part of their workplace health and safety monitoring, employers should gain assurance from the owner of any air conditioned building they occupy that air conditioning systems are maintained regularly and to the appropriate standard.

Q. How long does the influenza virus survive on surfaces present in the work environment?

Up to 24 hours in some circumstances. Influenza viruses can survive for 24-48 hours on hard, nonporous surfaces such as stainless steel and plastic but survive for less than 8 hours on cloth, paper, and tissues. Influenza can be transferred from stainless steel surfaces to hands for 24 hours and from tissues to hands for up to 15 minutes. Virus survives on hands for up to 5 minutes after transfer from environmental surfaces.

Therefore, in order to prevent transfer and infection it is important to clean environmental surfaces and practice thorough hand hygiene regularly during the working day.

Q. Can I catch influenza from a door knob?

Yes it is possible, that is why good hand hygiene and regular cleaning is important.

The influenza virus can be transferred through touch contact with infectious (wet) respiratory secretions on surfaces in the everyday environment. These surfaces include door handles, taps, lift buttons, stairwell railings, keyboards that have deposits of the infected secretions on their surfaces, but then there has to be hand-to-face contact or another means of transferring the virus to the face.

Q. Should we be changing our current disinfection practices?

The threat of a pandemic provides a good opportunity to review disinfection practices for high-risk areas, such as toilets, toilet locks, faucets, door handles, railings, bench surfaces, ATM keys, computer keyboards and so on. We do not recommend any change to the type of disinfectants currently in use.

Q. Why is hand hygiene so important? (see hand hygiene update at end of document)

Hand hygiene (both thorough washing and drying) is still the single most important measure to reduce the risks of transmitting infection from one person to another.

Hands should be washed regularly with soap and water or an alcohol-based hand rub and then thoroughly dried, preferably using single use towels.

Hands should always be washed and dried after contact with respiratory secretions or after touching surfaces that may have been contaminated with respiratory secretions.

Hand-to-face contact, which occurs during such activities as eating, normal grooming or smoking, presents significant risks because of the potential for transmitting influenza from surfaces contaminated with respiratory secretions, and for this reason, hands should always be washed and dried before any activity that involves hand-to-face contact.

Q. What are 'respiratory hygiene' and 'cough etiquette'?

People with respiratory infection symptoms should practise the following cough/sneeze etiquette whenever they are in the presence of another person.

All people with symptoms of respiratory infection (runny nose, sore throat, cough) should:

- avoid close contact (less than 1 metre) with other people
- cover their nose and mouth when coughing or sneezing
- use disposable tissues to contain respiratory secretions
- immediately dispose of used tissues in the nearest waste receptacle
- if hands are used to cover nose/mouth during sneezing or tissue/handkerchief used to blow nose, immediately wash and dry hands.

Q. In my day to day work I often see visitors to New Zealand wearing respiratory masks – could they spread influenza?

There are a range of reasons why air passengers might want to wear a respiratory mask. They may have a respiratory infection and may want to reduce the risk of transmission to others or they may believe that wearing a mask reduces the risk of them getting a respiratory infection. Whatever the reason, the risk of transmission of respiratory infection from a person wearing a mask is not considered important provided those around them practice normal precautions and personal hygiene.

Q. Okay, so my risk of catching H5N1 avian influenza is negligible at the moment, but at the airport I see thousands of people who might be carrying influenza viruses, can I do anything to prevent myself getting it?

Social distancing

A distance of at least 1 metre should be maintained between persons wherever possible. Greater distances are more effective. Those dealing with the public but working behind glass or perspex screens will have additional protection.

Vaccination

Every year you can have the flu vaccination. As the circulating strain of influenza virus changes frequently, a new vaccine is made every year. To get your immunity to the new virus you will need to get the new vaccine.

Hand Hygiene

Hand hygiene (both thorough washing and drying) is still the single most important measure to reduce the risks of transmitting infection from one person to another.

Personal protective equipment

The proper use of gloves will also confer added protection against hand transmission of influenza viruses.

Q. What should I do if I have symptoms suggesting influenza?

Influenza is very easily spread and so if you have symptoms suggesting influenza, you should stay home from work, avoid public places and close contact with others. If you have influenza, you should always cough and sneeze into a disposable

tissue and thoroughly wash and dry your hands afterwards.

Q. What is Tamiflu and how effective is it against avian influenza?

Tamiflu is an anti-viral medicine taken in the form of a tablet (it is not an injection or a vaccination). It is effective against seasonal influenza and avian influenza circulating in birds in Asia. If taken within 48 hours of becoming ill it stops the virus from bursting out of infected cells, infecting new cells and possibly other people. When people have seasonal influenza, Tamiflu reduces symptoms and may shorten the duration of illness by a day and a half. It is not known if Tamiflu will cure people sick with avian influenza. Vaccination is best at preventing seasonal influenza but no vaccine is currently available for avian influenza.

Q. Should I try to get some Tamiflu?

The Ministry of Health suggest that if you wish to consider obtaining some Tamiflu that you discuss the matter with your doctor. The decision whether to prescribe Tamiflu rests with your doctor. Tamiflu is a prescription-only medicine in New Zealand and is not subsidised by the Government.

Q. What is the government doing about planning for a possible influenza pandemic?

New Zealand was one of the first countries in the world to develop a pandemic preparedness plan. Planning began four years ago, and the plan is under continual revision.

The plan has five components:

- Planning for it - the current phase
- Keeping it out - border management to prevent influenza being introduced
- Stamping it out – controlling clusters of illness in the community
- Managing it - full measures to reduce the impact of a pandemic
- Recovering from it - putting in place measures to return services to normal

Because an influenza pandemic would have significant impacts on New Zealand, all Government agencies are involved in planning for their sectors. Issues under consideration include border management, maintenance of law and order, issues for educational organisations, restricting public gatherings, restricting internal travel, managing the impact on society, critical infrastructure (such as a continuing supply of energy, clean water, etc), and informing and educating people on looking after each other at home.

Government agencies are working to ensure that any effects within the state sector would be minimised, looking at what essential services would need to be maintained in the event of a pandemic and how they could maintain enough staff to do this.

Update on Hand Hygiene

Hand Hygiene (thorough hand washing and drying) is still the single most important measure to reduce the chances of transmitting infection from one person to another.

Hands should be washed regularly with soap and water, an alcohol-based hand rub or an antiseptic hand wash and then thoroughly dried, preferably using disposable tissues or towels.

Hands should always be washed and dried after contact with respiratory secretions or after touching surfaces that have been contaminated with respiratory secretions. Border workers dealing with objects and surfaces that respiratory secretions may have contaminated (e.g. eating utensils, cups, passports) should wear gloves. Hand hygiene should be practised before putting on and after removing gloves.

Hand-to-face contact, which occurs during such activities as eating, normal grooming or smoking, presents significant risks because of the potential for transmitting influenza from surfaces contaminated with respiratory secretions, and for this reason, hands should always be washed and dried before any activity that involves hand-to-face contact.

What is Hand Hygiene?

Hand Hygiene = Hand Washing + Hand Drying

The actions taken to decontaminate the hands of micro-organisms bacteria, protozoa and viruses with the potential to cause human illness are collectively referred to as 'hand hygiene'. In simple terms *hand hygiene is more than just hand washing*. It includes hand drying.

Hand Washing

The Ingredients = Running Water + Soap + Friction + Time

The time spent washing is important in reducing the transmission of pathogens. Hand washing with running water, and hand friction by vigorous rubbing and soap for 20 seconds appear to result in a very small number of bacteria trans-locating to touched surfaces.

Hand Drying

Time spent drying is important – 'Dry Hands Are Safe Hands'

The drying time required to reduce the transfer of germs varies with each drying method. Repeated drying of hands on a single reused cloth towel is not recommended. This is because the towel is likely in time to become wet and may act as a source of hand contamination rather than a solution to it. Wet hands transfer bacteria more efficiently than dry hands not washed at all!

The methods and recommended duration of drying for each are outlined in Table 1.

Table 1. Recommended drying methods and times

Drying method	Recommended protocol	Total drying time	Comments
Single use cloth (roller) towel	Rub hands on two sections of towel drying for 10 seconds on each section	20 seconds	The first section removes the bulk of the water, the second achieves a thorough dryness
Single use paper towel	Rub hands on two towels drying for 10 seconds on each	20 seconds	The first towel removes the bulk of the water, the second achieves a thorough dryness
Airtowel	Rub hands together while rotating under warm air	45 seconds	Prolonged period required for complete dryness
Combination of Cloth/disposable towel and Airtowel	Rub hands on one section of cloth or disposable towel for 10 seconds to remove bulk of water then rotate while rubbing together under an air towel for 20 seconds	30 seconds	This is called the 10/20 drying method.

Hand Sanitizers

The use of hand sanitizers such as alcohol-based solutions is useful to decontaminate hands if there is no access to hand washing facilities. However, their use does not replace the need for thorough hand hygiene.

Hand sanitizers should be seen as an additional hand hygiene step. Hand sanitizers are less effective when there is a build-up of organic material on the hands. If there is visual soiling of the hands full hand hygiene (washing and drying) should be performed. If there is no visual soiling, up to 6 applications of hand sanitizer can be made before the need for hand washing and drying.

One other important point to note is that after application of the sanitizer solution/gel the hands should continue to be rubbed together until they are completely dry.

Use of Gloves

While rubber gloves can reduce contamination of the hands but their inappropriate use may result in an increased risk of infection. Gloves will be contaminated during normal use just as the skin would be in their absence and staff should be fully conversant with how to use them. Key points include:

- Before putting gloves on full hand washing and drying should occur. If this is not possible, an alcohol-based hand sanitizer should be used (as above).
- Care needs to be taken when removing gloves not to contaminate the skin of the hands with dirty gloves.
- Gloves will contaminate other items in the work environment such as computer keys boards and pens. Care needs to taken not to bring objects near the face.
- There should be documented standard operating procedures in relation to the use of gloves.

A short video about the safe use of gloves is available on the internet:

<http://www.health.gov.au/internet/wcms/publishing.nsf/Content/phd-pandemic-prepared-protected.htm>