## Foreword

During the last decade Australian businesses have demonstrated their resilience and ability to respond to disruptions such as the emergence of terrorism and the SARS outbreak.

Events such as these have taught us that while it is impossible to predict the future, it is certainly possible to be prepared, and to have appropriate management plans in place to minimise the impact of these disruptions and to expedite recovery.

Now a new threat is on the horizon—a human influenza pandemic, and it is predicted to have a more significant impact around the world than any crisis of recent times.

The Australian Government has management strategies in place for a human pandemic. These include the *Australian Health Management Plan for Pandemic Influenza*, and the *National Plan for Human Influenza Pandemic*. These plans provide detail on our health response and what actions the Commonwealth and the state and territory governments would take should a pandemic eventuate.

Planning for a pandemic presents new challenges for the government and Australian businesses alike, and a whole of society response will be required. Government alone cannot manage a pandemic and its effects. It will take a combined effort from everyone— all levels of government, industry and businesses, non profit and community organisations, and the community in general.

A pandemic would arise rapidly, spread quickly and likely come in waves, each of which may last for months. Should this occur, many Australians would become very ill, and regrettably, some would die.

The most significant impact on Australian businesses would be on staffing levels. Experts suggest that business should plan for 30–50 per cent staff absences at the peak of the pandemic. For some businesses, these kinds of absences would be devastating particularly in our essential service sector.

The Government is encouraging businesses to rethink their existing contingency strategies to cope with an event like a human influenza pandemic. If society is to continue its normal functioning, essential services such as water supply and sanitation, electricity, fuel, telecommunications, banking, food supply and health care will need to continue to operate.

For those businesses not providing essential services, you should consider if you might need to operate at a reduced level, or even close down temporarily, and also how you might resume your normal business activities.

In recognising this, the Australian Government has developed this business continuity guide to assist Australian businesses in their own pandemic planning.

We know that the actions of governments and businesses in preparation for a pandemic and during a pandemic will have a major impact on Australia's ability to cope, on the economy and on our ability to recover quickly.

The Government is encouraging advanced preparation by both private and public sector organisations and it is up to businesses themselves to prepare and ensure they are in the best position to manage the effects of a pandemic.

I would encourage all organisations in Australia, particularly those in our critical infrastructure sector, to develop their own pandemic plan and I know you will find this guide a practical planning tool.

Te Marlo

Ian Macfarlane MP Minister for Industry, Tourism and Resources June 2006

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## Health information posters are located inside the back pocket of this guide



## Introduction and purpose of this guide

The prospect of an influenza pandemic is real. The influenza strain that is currently causing some concern, in birds mostly, is H5N1 (also known as avian influenza or bird flu). Since avian influenza broke out in late 2003, the World Health Organization (WHO) has warned that, should the virus mutate and be easily transferred from human to human, the world could be facing an influenza pandemic with significant consequences.

An influenza pandemic is a disease outbreak that occurs worldwide when:

- a new strain of influenza virus emerges to which no-one is immune;
- the virus causes disease in humans; and
- the virus is easily spread between humans.

In the absence of immunity, a new influenza strain can rapidly spread across the globe, causing epidemics or pandemics, infecting large numbers of people with fatal results.

The very nature of an influenza pandemic in Australia will be unlike any other modern disaster and will create new challenges for business continuity planners. It may:

- arise rapidly and spread quickly;
- make people very ill and many could die;
- generate unprecedented levels of fear and anxiety;
- occur in several waves, each lasting for several months;
- require full community mobilisation;
- result in health care services not being able to provide direct care in some cases; and
- result in very high staff absence rates for some periods during the pandemic.

With these factors in mind, businesses will need to rethink their existing continuity response strategies to cope with such an event.

The actions of governments and businesses in preparation for a pandemic and during a pandemic will have a major impact on Australia's ability to cope with its effects, the economy and our ability to recover quickly.

This guide has been developed to help Australian businesses consider what impact a human influenza pandemic might have on their business, and to help businesses take appropriate actions to prepare themselves as best they can. Although the Government can assist in providing access to information and planning tools, it is up to businesses themselves to prepare and ensure they are in the best position to manage the effects of a pandemic, and to recover as quickly as possible.

Government alone cannot control and manage the spread of a pandemic or maintain the essential services that businesses and the community in general will require. Businesses will also play a vital role in helping to manage a pandemic in Australia. Advanced preparation will be critical in controlling a pandemic by ensuring essential products and services such as electricity, telecommunications, fuel supply, water, food, health, transport finances and others that help maintain the core functions and services in the business and general community can continue.

This guide provides Australian businesses and other organisations with a range of tools and information to help them prepare for a human influenza pandemic in Australia.



## H5N1 (avian influenza or bird flu)

In 2003 the World Health Organization (WHO) reported an outbreak of a highly pathogenic avian influenza (bird flu) in birds affecting a number of countries in south and central Asia. Since then, outbreaks have occurred in other regions around the world. Avian influenza, or bird flu, is a contagious viral infection that can affect all species of birds, and can cause disease in humans who come into close contact with infected birds.

Avian influenza viruses infect wild bird populations, particularly water birds, typically without causing symptoms. The virus spreads through bird faeces and contaminated water or dust. When avian influenza spreads to poultry or other birds, it can cause more severe disease.

There are several strains of avian influenza. The strains that cause the greatest number of deaths are called highly pathogenic avian influenza. The strain involved in the current outbreak in birds is called the H5N1 strain. H5N1 was first recognised in 1997 in Hong Kong. At that time millions of chickens were culled after the virus was found to cause disease in people exposed to infected birds.

The WHO reports a new pattern of rapid geographical spread of the virus in wild and domestic birds. The World Organization for Animal Health (OIE) confirms that 30 countries have reported their first cases of infection in birds since the beginning of February 2006 (as at 2 June 2006), and that number is expected to grow. (See www.oie.int/eng/en\_index.htm for updated information.)

Australia's Chief Veterinary Officer, Dr Gardner Murray has reported (at 6 March 2006) there is no evidence of H5N1 avian influenza in Australia, based on surveillance of wild birds and investigations of bird deaths.

## In humans

Eighteen people were known to be infected in Hong Kong in 1997, with six deaths. Fortunately, the virus was not able to spread from person to person, and the outbreak was halted in Hong Kong by the culling of chickens.

The rapid global spread of H5N1 in birds remains of concern, because of the high fatality rate among the small number of human cases thus far. Between December 2003 and 23 May 2006 there have been 218 confirmed human cases of H5N1 influenza worldwide, and 124 deaths.<sup>1</sup> The situation is being monitored very closely.

Considering the millions of birds infected, and the potential number of people exposed to the virus, the number of human cases so far is considered low. In addition, while there have been a handful of cases that have not been attributable to bird to human transmission, there is no evidence of efficient human to human transmission. It seems that people need to be exposed to an overwhelming dose of the virus in close proximity to contract it from another person.

This pattern of infection shows that the H5N1 virus is not thus far well adapted to infecting humans. Scientific opinion on whether H5N1 will become better adapted to infecting humans is mixed. One view is that the longer people are exposed to the virus

<sup>1</sup> Up to date figures are available from the WHO website http://www.who.int/csr/disease/avian\_ influenza/

via birds and the greater the numbers of people exposed, the greater the chance of the virus adapting. Another view is that humans have now been exposed to the virus over a period of years (it first emerged in 2003) and the fact that it has not yet adapted to humans may be a sign that it is not capable of doing so. A pandemic may arise from a different influenza virus than the H5N1 strain.

The World Health Organization recognises the continuing risk of H5N1 becoming better adapted to humans and recommends that all countries prepare for a possible pandemic.

## Human Influenza

The influenza virus is a very common virus among humans. Its symptoms are well known:

- chills, shivering and a fever (temperature >38°C);
- onset of muscle aches and pains;
- sore throat;
- dry cough;
- trouble breathing;
- sneezing;
- stuffy or runny nose; and
- tiredness.

Influenza may be infectious for up to two days before the symptoms of fever and cough begin. This means people who seem well can actually pass the virus on to others.

At any one time there are several strains of influenza virus circulating amongst birds and animals and amongst humans in various parts of the world. Some strains of the virus are peculiar to bird or animal species and some are peculiar to humans. Some strains of the virus pass between different species of birds, animals and humans, with varying degrees of efficiency, causing illness which varies in severity between species. Some species suffer mild symptoms or none at all, and act as carriers for the virus.

#### Definitions

Influenza (the flu)	A highly contagious disease of the respiratory tract caused by the influenza virus.
Influenza Type A	A virus that occurs in humans and animals.
Influenza Type B	A virus that occurs only in humans.
Epidemic	A sudden increase in the incidence of a disease affecting a large number of people and spreading over a large area.
Pandemic	Epidemic on a global scale. Only Type A influenza viruses have been known to cause pandemics.
H5N1 avian influenza (bird flu)	Type A virus affecting birds but passable to humans following close contact with sick or dead birds. It causes severe influenza-like symptoms and may result in death.

## **Prevention and Treatment**

## **Infection Control**

Some of the most basic measures can have the greatest effect in controlling the spread of influenza. Personal hygiene such as hand washing, covering your nose and mouth when coughing or sneezing, workplace cleaning, use of protective equipment, and avoiding contact with others will help you avoid infection. More information on these and other preventative measures can be found in part 6 of this guide.

## Immunisation

The pandemic vaccine will be different from seasonal flu injections. The seasonal flu vaccine will not protect you against the pandemic virus, but may protect you from other less severe strains of flu.

A pandemic strain flu vaccine that would provide immunity to the H5N1 virus has not yet been developed. Much research is currently being undertaken to develop a human vaccine from the current bird flu strain.

As the pandemic strain cannot be predicted in advance, there will be a time delay before production can commence, and a further delay before there is sufficient vaccine for all Australians. Infection control measures are the most effective protection ahead of a vaccine being developed.

## Influenza antiviral medication

Antiviral medications may provide some effectiveness in preventing infection and in treating acute influenza infection. There is currently limited and mixed evidence about the effectiveness of antivirals.

To be effective, antivirals need to be administered either before or soon after a person is infected. The delay between infection and noticeable symptoms reduces the opportunity for effective use. If administered after the onset of symptoms, the antivirals may lessen the severity of the symptoms and duration of the influenza infection.

At present, two different commercial antivirals have been developed—Tamiflu and Relenza. A doctor's prescription is required for these antivirals, however, at present they are not readily available from pharmacies.

The Australian Government has purchased a large stockpile of antivirals, which will be used to minimise the overall illness and possible deaths. In the early stages of a pandemic people may be given the medication (a short course of capsules) if they are sick with pandemic influenza or if a member of their family or close work colleague develops influenza. This might prevent them from contracting the infection.

People whose work places them at high risk of contracting influenza (e.g. health care workers and others in close contact with infected people) may be given the antivirals for longer periods of time. When the pandemic vaccine is available, preventative antivirals will not be necessary, except to cover the period until the vaccine produces immunity.

Given the shortage of supply of antivirals it is unlikely that they will be available to businesses generally for use by staff. More practical and effective strategies for businesses to assist in keeping staff healthy include a range of infection control measures outlined in this guide and also available from the Department of Health and Ageing.



## **Government Support**

Since the emergence of avian influenza (bird flu) in Asia in 2003, the Australian Government has so far committed a total of \$599 million on avian influenza and pandemic preparedness measures, including \$414 million on the Australian health response such as grants of \$6.5 million for urgent research projects aiming at preventing, detecting or controlling bird flu outbreaks, \$141 million to help our regional neighbours, and \$44 million to strengthen Australia's frontline defences against avian influenza.

## **Australian Health Management Plan**

*The Australian Health Management Plan for Pandemic Influenza* was released on 30 May 2006. It builds on The *Australian Management Plan for Pandemic Influenza*, released by the Minister for Health and Ageing in June 2005. (These documents are available on the Department of Heath and Ageing website www.health.gov.au/pandemic)

The Health Management Plan will guide Australia's response in managing pandemic influenza and will be continually updated and revised to include the most current research and expert information relating to areas such as infection control during a pandemic. It will be supported by a series of technical papers.

The Health Management Plan outlines, from a health perspective, what the Australian Government is doing, and what the health sector, key stakeholder groups, organisations, the community and individuals can do to prepare for a pandemic.

*The Australian Health Management Plan for Pandemic Influenza* relies on two main strategies. In the first instance, the focus will be on containment of the spread of the virus to make time for a vaccine to be produced. Containment strategies may include reducing travellers to Australia, infection control, social distancing, short term home quarantine for those exposed to the virus, and the targeted use of antivirals. If containment is no longer possible due to rapid spread of the virus, efforts will concentrate on maintaining essential services to keep society functioning until a pandemic vaccine becomes available, or the pandemic abates.

The Health Management Plan divides a pandemic into the six global phases as detailed by the World Health Organization, and there are also six phases in Australia, as well as a recovery stage. Currently we have not yet reached Phase 1 in Australia, while overseas, Phase 3 has been reached. This means there have not been any effective human to human infections overseas and no cases reported in Australia, even in birds. The situation is being monitored very closely.

The Department of Health and Ageing will provide advice through the media and on their website if the pandemic phases change.

## Pandemic phases

Period	Global phase	Australian Phase	Description of phase
Inter- pandemic		Aus 0 <b>Current Phase</b> in Australia	No circulating animal influenza subtypes in Australia that have caused human disease.
	1	Overseas 1	Animal infection overseas: the risk of human infection or disease is considered low.
		Aus 1	Animal infection in Australia: the risk of human infection or disease is considered low.
	2	Overseas 2	Animal infection overseas: substantial risk of human disease.
		Aus 2	Animal infection in Australia: substantial risk of human disease.
Pandemic       3         alert       4         4       5	3	Overseas 3 <i>Current Phase</i> <i>overseas</i>	Human infection overseas with new subtype(s) but no human to human spread or at most rare instances of spread to a close contact.
	Aus 3	Human infection in Australia with new subtype(s) but no human to human spread or at most rare instances of spread to a close contact.	
	4	Overseas 4	Human infection overseas: small cluster(s) consistent with limited human to human transmission, spread highly localised, suggesting the virus is not well adapted to humans.
		Aus 4	Human infection in Australia: small cluster(s) consistent with limited human to human transmission, spread highly localised, suggesting the virus is not well adapted to humans.
	5	Overseas 5	Human infection overseas: larger cluster(s) but human to human transmission still localised, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully adapted (substantial pandemic risk).
		Aus 5	Human infection in Australia: larger cluster(s) but human to human transmission still localised, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully adapted (substantial pandemic risk).
Pandemic	6	Overseas 6	Pandemic overseas—not in Australia: increased and sustained transmission in general population.
		Aus 6a	Pandemic in Australia: localised (one area of country).
		Aus 6b	Pandemic in Australia: widespread.
		Aus 6c	Pandemic in Australia: subsided.
		Aus 6d	Pandemic in Australia: next wave.

These six phases would be followed by a Recovery Stage.

## Containment

## Quarantine

In the event of a pandemic, the Government will take any necessary public health action that may be required to contain the spread of the pandemic virus.

The Department of Health and Ageing, Australian Quarantine and Inspection Service, and state/territory health authorities undertake the management of human quarantine.

The most effective way of stopping or minimising the risk of a pandemic coming into the country is screening at the borders and there are many measures that will be put in place, should a pandemic occur, to ensure that anyone who may be infected will be detected and placed in isolation or quarantine.

Further work will be progressed by relevant agencies on border restrictions/controls and the implications of these, together with quarantine arrangements, should they be necessary.

Some measures might include checking all incoming passengers for high temperature and signs of flu by health personnel located at airports to meet all incoming flights.

Other actions may include:

- home quarantine of infected persons;
- people being required to submit themselves for medical examination;
- people, places, buildings, ships, animals or other things may be isolated, disinfected or quarantined;
- refusing entry into Australia's air or sea ports by any vessel that is reported to be infected, or from an infected area;
- temporarily closing public places, including schools, workplaces, child care centres, churches, shopping centres, bars and clubs and other places where groups of people gather;
- advising people to stay at home; and
- culling infected animals.

In the event of a human influenza pandemic occurring overseas, but not yet reaching Australia, there could be a substantial reduction in people entering Australia because of border control measures, to delay the spread of the pandemic to Australia for as long as possible.

## Use of antivirals

In the early stages of a severe outbreak, the highest priority for the provision of antivirals would be people who had been exposed to the virus or who work in areas of high risk of exposure, such as health care workers, quarantine officers and others, to contain the spread of the virus.

## Maintaining society's functions

If containment of the spread of the virus in Australia is no longer possible, then in the early stages of a pandemic, focus would be on maintaining essential or 'lifeline' services to the community and businesses. At this time, the highest priority for antiviral treatment, and vaccine (should one become available) would be personnel who may be at risk of exposure to the virus (e.g. health workers, ambulance personnel, staff screening incoming passengers from infected countries, etc).

## **National Action Plan for Human Influenza Pandemic**

The Australian Government, state and territory governments and the local government sector are all contributing to a *National Action Plan for Human Influenza Pandemic*. This plan will bring governments together to develop nationally consistent measures to attempt to prevent pandemic influenza from entering Australia and to prevent human transmission of the virus. It will also identify a coordinated rapid response by all levels of government in the event of a human pandemic occurring. A domestic exercise (or pandemic influenza simulation) will take place in late 2006 to test elements of the National Action Plan.

## State and territory government activities

Australia's state and territory governments are also undertaking pandemic planning. Businesses should make themselves aware of these developments by visiting the websites in their state/territory.

#### New South Wales

www.health.nsw.gov.au/pandemic/

#### Queensland

www.qld.gov.au/services\_for\_queenslanders/health\_and\_communities/index\_avian.html

#### Victoria

www.health.vic.gov.au/ideas/regulations/vic\_influenza.htm

#### **Northern Territory**

www.nt.gov.au/health

#### Western Australia www.health.wa.gov.au/disaster/pandemic\_influenza/main/state\_plans.cfm

#### **Australian Capital Territory**

www.health.act.gov.au/c/health?a=da&did=10098808&pid=1132696244

#### South Australia

www.health.sa.gov.au/INFECTIONCONTROL/Default.aspx?tabid=164

#### Tasmania

Under development. Contact Belinda Fenney-Walsh belinda.fenneywalsh@dhhs.tas.gov.au



## **Characteristics of a pandemic**

The likely impact of a human pandemic depends upon characteristics of the virus such as its infection rate, the proportion of the population infected in each age group, and the severity of illness caused.

In the last century, pandemics have spread to all parts of the globe within less than a year and affected more than a quarter of the total population. The ability of health and emergency systems to respond can be put under pressure by the rapid increase of illness in the community.

Historically, there is a tendency for pandemics to occur in waves, so a second and sometimes third wave, may begin simultaneously in different parts of the world, and should be expected. However, this pattern may change as a result of interventions such as the use of antivirals, vaccination, infection control practices or social distancing measures. Each wave could typically last about eight weeks, building to a peak in week four before abating again.

A pandemic among humans will not be like a natural or physical disaster that you may have experienced previously, there will be a wider variety of variables that may affect businesses.

The impact of a pandemic could be widespread, even nation-wide, or may be localised to a single area through the use of containment practices. If other areas are also affected by the virus, outside assistance could be limited.

Smaller outbreaks are known as clusters. To date, there have been avian influenza clusters in some overseas countries. A cluster occurs in limited settings indicating a single source point, for example, a family or a group of people, in a hospital or a town.

Many existing business continuity plans assume some part of an organisation is unaffected and can take up the required capacity for the organisation to perform at the required level—this may not be the case with a pandemic. They may also assume the event is short/sharp and that recovery can start immediately. A pandemic would not be a short, sharp event leading immediately to commencement of a recovery phase. It is not possible to predict exactly how long a pandemic may last or when it may occur.

It is quite likely that there will be some advance warning from the development of the pandemic overseas, but it is always possible that any warning period may be minimal. Should pandemic influenza spread within Australia it will probably be some weeks before the full impact on the workforce would be felt, although there may be some early impacts resulting from closures of schools and similar containment measures.

This planning guide assumes that a pandemic will be wide-spread and will impact businesses in several ways—employee absenteeism will probably have the greatest effect. There would also likely be shortages of supplies/resources, reduction in customers, and venue/event closures are also possible.

## Staff absenteeism

It is estimated that businesses should plan for 30 to 50 per cent staff absences at the peak of a pandemic.

Staff absences can be expected for many reasons:

- illness/incapacity (suspected/actual/post-infectious);
- some employees may need to stay at home to care for ill family members;
- others may need to stay at home to look after children (as schools/child care centres are likely to be closed);
- people may feel safer at home (e.g. to keep away from crowded places such as public transport); and
- some people may be fulfilling other voluntary roles in the community.

## Other immediate effects

A pandemic may have other impacts on businesses, for example:

- supplies of materials needed for ongoing activity may be disrupted (e.g. if they are imported, especially from a country that may be severely affected by the pandemic, or if a local supplier is no longer able to produce the goods/services);
- availability of services from sub-contractors or other suppliers may be impacted (this may affect maintenance of key equipment, and is an area that merits close planning attention);
- demand for services may be impacted—demand for some services may increase (internet access is a possible example); while demand for others may fall (certain types of travel may reduce);
- fuel and energy supplies may be disrupted to some locations at times; and
- the movement of people, imports and exports may be restricted/delayed by quarantine and isolation measures both within Australia and overseas.

## **Financial implications**

Some businesses may be placed under financial stress by a pandemic virus because of the potential disruption to normal activity. Sales revenue could fall because of operational problems or a lack of product demand. However, payments to staff, suppliers or financiers would be expected to continue where possible. Consequently, strategies to deal with a sudden slump in activity could assist businesses maintain a sound financial position.

According to the Treasury, a global pandemic could have a significant impact on the economy. While the projected economic effects of a pandemic vary widely, the Treasury's modelling indicates that staff absenteeism, combined with reduced consumer spending and investment confidence, could lower GDP by more than five per cent over the first year.

The extent to which a particular business would be affected by a pandemic virus depends on a range of factors, including geographical proximity, the nature of the business, and the length and severity of the pandemic. The measures outlined in this chapter assume a significant business impact. In most cases, they are general measures that would help a business cope financially with a sudden onset recession from any source.

## Financial pressures

Businesses affected by a pandemic could face cash flow problems because of a lack of sales revenue. Revenue could be lower for any of the following reasons.

- Businesses may need to close or downsize operations because of staff absences, supply chain problems, or quarantine measures.
- Consumers may avoid purchases and services that involve face-to-face contact (e.g. retail trade and tourism).
- Discretionary spending would be lower in general because of a lack of consumer confidence and reduced employment.
- Business and dwelling investment could be lower due to falls in investment confidence and activity.
- Commercial buyers may also be under financial stress and so delay payments or cancel orders.

Although business activity may be subdued, costs could remain static in a number of areas (if special arrangements are not put in place), such as:

- staff salaries and wages, which include payouts on leave entitlement;
- rent and leasing costs;
- payments to suppliers for contractual purchases;
- loan repayments; and
- taxes.

Businesses relying on credit arrangements with suppliers or financial institutions may also face extra pressures if creditors seek to protect their own financial positions. Suppliers may be unwilling to provide goods or services without early up-front payment. Financial institutions may limit credit availability.

## **Financial preparation**

The capacity of a business to deal with the financial pressures associated with a pandemic virus depends on the strength of its balance sheet as well as its financial flexibility. Extra funds may be required over the duration of the business downturn to compensate for a drop in operating profits and to maintain business liquidity.

## Cash reserves

Maintaining a healthy reserve of cash (i.e. at-call funds held with a financial institution such as a bank) may be a safe method for ensuring a business can meet short-term financial obligations. Cash reserves can be accessed quickly and at minimal cost. Enough cash could be required to cover a business downturn extending for two or more months.

Although the yield on cash is relatively low, other assets are less liquid. Equities are generally not considered to be an ideal source of emergency funding by financial advisers since company values can decline sharply when there is an economic downturn.

Businesses should note that supply shortages may also lead to short-term price increases for uncontracted business inputs.

## **Credit facilities**

Credit may be in short supply during an influenza pandemic because of falling asset prices, potentially greater calls on savings, and the heightened business risks. Consequently, as part of general continuity planning, businesses may consider establishing emergency lines of credit.

## Insurance

Standard insurance policies will generally not cover financial losses associated with a pandemic. This is because insurance is not targeted towards the specific causes of the financial losses, such as lower product demand or staff absenteeism. In addition, insurance policies often contain 'force majeure' (natural disaster) clauses to protect insurers from incurring excessive liabilities.

A few adverse impacts of an influenza pandemic may be covered by some insurance policies. Self-employed people may be able to obtain Business Overheads Cover, which covers regular fixed operating expenses of the business if the individual becomes sick. In addition, companies can take out Key Person Insurance, which provides death and/or disability cover in relation to an individual who is critical to business operations (including a director or specialised supplier). Companies can also insure against events such as suppliers failing to deliver vital production inputs, or fuel prices rising unexpectedly. Businesses may also wish to consider taking out Loss of Profit Insurance.

Businesses should review their policies with their insurers and ask if pandemic related issues are covered, and if not, consider taking out additional coverage.

## Closure strategy (for non essential services)

Businesses can lessen the risks associated with a pandemic by minimising long term financial obligations (sunk and fixed costs). This enables a business to close, either temporarily or permanently, incurring the least cost. Some methods for increasing flexibility include: negotiating shorter term contracts with suppliers and buyers; leasing rather than buying equipment; having flexible staffing arrangements; minimising inventories (i.e. have just-in-time operations, if viable); and maintaining low levels of debt. This approach may be prudent for certain businesses most exposed to risks from a pandemic (such as the tourism, education and childcare sectors) to consider.

## **Emergency measures**

Businesses with insufficient cash to meet their immediate financial obligations during a flu pandemic could pursue one or more of the following strategies to reduce short term financial pressures. (See also Chapter 5 for consideration of staffing policies.)

#### Secure credit

Businesses with a viable commercial future and significant assets may be able to secure credit from financiers. The terms of loan agreements may, however, be unfavourable for the borrower given banks and other financial institutions may be more cautious about providing loans during a pandemic. Obtaining credit may also take more time than usual because of greater demand for credit combined with staff shortages in the financial sector.

#### Liquidate assets

Financial or non-essential physical assets could be sold to provide necessary cash. There are, however, costs of doing this during a pandemic flu scenario. Asset prices could be temporarily low because of a general economic downturn. In addition, any temporary shortages of buyers could mean selling at a substantial discount.

## Adjust payment timing

A business may be able to defer certain payments (or advance payments to the business) in order to cope with temporary cash-flow problems. This depends on the cooperation of business partners (suppliers and buyers), financiers or staff. Purchase contracts, loan agreements and salary arrangements can all potentially be adjusted to reduce immediate financial pressures. Businesses also have the option of trying to ensure customers settle outstanding accounts.



## **Preparation**

To ensure you can continue to deliver your critical business processes, some planning and preparation will be required. Succession planning (for short and long term staff absences), and back-up staffing arrangements would be beneficial.

If you provide essential services for the community or other businesses, it is important that you are able to continue to deliver these services. Emergency management and overall national recovery will be greatly facilitated if essential services are available without significant interruption during a pandemic.

For businesses that do not provide essential services, you might like to plan for how you could best cope if you were to close during a pandemic (this is the worst case scenario for businesses and many businesses may continue to operate).

Continuity planning for a pandemic should include the following basics:

- identifying essential business activities (and the core people and skills to keep them running or alternative back-up arrangements);
- identifying the infrastructure and resources required for the organisation to continue operating at the minimum acceptable level;
- developing mitigation strategies for business/economic disruptions, including possible shortages of supplies and contingency plans for continued operation;
- ensuring relevant employees, customers and suppliers are aware of the contingency arrangements and that they work; and
- minimising illness in workers.

More detailed information on development of business continuity plans is available in the *Handbook: Business Continuity Management* published by Standards Australia/Standards New Zealand.

The scenarios included in Appendix B may be useful in highlighting some issues for consideration in developing your business continuity plan for an influenza pandemic threat.

Businesses may also benefit from viewing pandemic planning as an opportunity to review their overall business processes and look at opportunities to develop more robust business systems taking into account all types of disruptions they could face. By incorporating pandemic planning into your business' overall business continuity plan you may be able to improve your business operations.

If you have not previously developed a business continuity plan or considered the risks facing your business, how you could minimise the impact of those risks, and how you might respond should unexpected events occur, you might like to put some time into this type of planning.

## **Business continuity planning**

## Step 1: Identify your business' core people and skills

In the event of a pandemic, it is important that core people and core skills are available to keep essential parts of your business operating. The following points are designed to help you plan for this.

- What are the essential parts of the business?
- Who are the core people required to keep the essential parts of the business running and what core skills do they require?
- Are there sufficient back-ups for people and skills if there is a high level of absence?
- Are there other resources (e.g. volunteers, retirees, etc) which could be drawn on if necessary?
- Is it possible to coordinate/operate your business remotely, using telephone, fax and email?
- Who will develop and manage your pandemic contingency plan?
- Do you have any systems that rely on periodic physical intervention by key individuals to keep them going? How long would the system last without attention/maintenance?
- Do you have adequate infrastructure to support changes in business operation (e.g. computer networks or internet presence)?

Once the core people and skills are identified, ensure that they are aware of their responsibilities and how they will be managed in the event of a pandemic. Consider strategies for minimising the possibility that they become ill with influenza, such as working from home even in the very early stages of a pandemic, or other measures to reduce exposure to others who might have been exposed to the virus (see Chapter 6 for details on helping prevent staff from getting sick).

If working from home is not a well-established practice in your organisation, you may wish to encourage staff to experiment occasionally, to aid familiarity and to iron out any computer connection/technological issues.

You may wish to have non-essential staff stand down if human to human transmission of the virus occurs in Australia to help minimise the number of staff who may be exposed to the influenza virus.

## Step 2: Establish a pandemic planning team

When planning for a pandemic, it is a good idea to identify one or more people in your organisation who will be responsible for planning and workplace health and safety, if your business is large enough to warrant it. Some of the roles you identify might include are:

#### Continuity Plan Manager

- to oversee the development of your Pandemic Influenza Plan; and
- to communicate to your staff and clients what action is being taken to prepare for a pandemic.

#### Influenza Manager

- to ensure your workplace has adequate supplies of tissues, medical and hand hygiene products, cleaning supplies and other relevant personal protective equipment, such as masks, for people who become ill at work or to protect them from contact with co-workers or customers—it may be difficult to purchase such products once a pandemic begins;
- to set up a system to monitor staff who are ill, or suspected to be ill, in the event of a pandemic, including contacting staff who are unexpectedly absent from work. Has their GP been notified of their illness? Do you know who they have been in contact with? Is someone able to care for them? and
- to encourage staff to return to work once they are better, or at the end of a quarantine period.

#### Medical Adviser

If your business does not already have one, it may be prudent to ensure that you have access to medical advice in the event of a pandemic. At the time of a pandemic, national information lines will be available. State/territory governments will likely set up fever clinics or other methods of providing medical care during a pandemic. These will be widely advertised at the time. Businesses need to be aware of their local plans for health management.

## Step 3: Plan for staff absences

Issues you may wish to consider include:

- what critical staff numbers and skills are required to keep essential sectors of the business running—at what level does business stop? What arrangements need to be made to minimise risk to staff?
- if you do not provide an essential service, who should make the decision to shut activity down when absence rates threaten safe conduct of your business? and
- could some, or all, of your business operations shift to having most staff work from home with little warning?

Because an influenza pandemic may affect regions of Australia (and the world) differently in terms of timing, severity and duration, businesses with regional offices may need to consider rotating service delivery from hard hit areas to influenza-free areas, or areas that have been declared to be in a post-pandemic period. Restrictions on movement of people from region to region may be imposed, so rotation of staff would likely be difficult.

Businesses with overseas offices, or which use services outsourced from overseas, may be disproportionately affected. Not all countries have the means to cope with a pandemic. Employees and staff contracted outside Australia may have increased rates of illness and absence.

Some strategies to help lessen the impact of staff absences could include:

- sharing of critical information/filing and general knowledge management (store your information in known, accessible and shared locations);
- increasing the number of staff authorised to access critical information and systems;
- identifying back-up personnel (2 or 3) for key positions;

- encouraging staff to multi-task (learning other people's jobs);
- planning in advance how you will scale down your operations at various absenteeism levels and at what point you will suspend operations (if you do not provide essential services);
- establishing work from home policies;
- establishing leave and remuneration policies for staff unable to come to work; and
- conducting exercises to see how reduced staff levels might affect your business.

## Step 4: Consider the effects of supply shortages on operations

Shortages of supplies may occur because of increased demand during the pandemic (i.e. cleaning supplies, home-based services, etc). Pandemic planning should consider the need for ensuring adequate availability of essential supplies (e.g. stockpiling, if appropriate or securing alternate supply sources).

Shortages may also occur because of disruptions in transportation systems or the inability of suppliers to meet demands because of their own staff shortages. Many Australian goods travel considerable distances by truck, train, ship or aircraft, and are vulnerable to disruption.

Absences of workers/drivers and other transportation staff may affect both the production and delivery of needed supplies. Supply lines may also be affected by mandated or self-imposed travel restrictions (e.g. transporters unwilling to travel through, or to, infected areas). Discuss with key suppliers a plan for regular shipments in the event of shortages or disruptions in transportation systems.

International air and ship movements may be disrupted in a pandemic, and this may impact on imported goods, especially if they normally arrive in freight-holds of passenger aircraft.

#### Businesses that export

Businesses that rely heavily on exporting their products may be severely impacted if trade is affected and export markets are not operating fully, or significant delays are imposed. Businesses should take these issues into consideration when developing their business continuity plans.

## Step 5: Establish and maintain two-way communication

Consider communication needs and how communication channels might be maintained:

- throughout your business; and
- with government, key suppliers, key customers, and key contractors.

Two-way communication is particularly important so that you will:

- know if or when the overseas or Australian pandemic phase changes (the Department of Health and Ageing will provide this advice). This is important as it will likely be a trigger for you to take certain action in your continuity plan;
- become aware of any developments in treatments or new information about avian flu (e.g. medical advisories);

- know about the spread in other countries—particularly important if staff travel overseas;
- know about quarantine arrangements, if required; and
- be able to contact your staff and customers quickly if you need to get messages to them (e.g. office closures or scaling down of non essential parts of the business).
   You may like to consider establishing a website where this information can be posted, group email address lists or pre-recorded phone messages.

Updated health information will be available from the Department of Health and Ageing website at www.health.gov.au/pandemic

## Step 6: Consider human resource issues

The extent of your planning in this area will depend on the nature (essential or non essential services) and size of your business or workplace (e.g. home based business or national company).

Your business planning might include:

- identification of triggers where you might decide to stay open for business or close the business (if you do not provide essential services);
- consideration of employee risks; and
- application of relevant legislation and your duty of care as an employer.

#### Deciding whether a workplace should stay open or close

A workplace may close through lack of staff, lack of customers, or because it presents an unacceptable level of risk to employees or others.

Different industries will involve varying degrees of risk in a pandemic, and there will be varying scope for staying in operation while reducing the risk. Businesses that are considering temporary closure should examine their insurance policies (especially Loss of Profit Insurance) and consult with their insurers before making a decision to close, during a pandemic.

Some sectors may be able to manage the risk with relatively few restrictions, while the challenges in the service sector—including health, education, entertainment, hospitality and other industries—will be far greater. In the health sector, for example, the inherent risks will be compounded by a need to stay open to provide treatment and care.

#### Businesses that stay open and the law

If a workplace or business stays open during a pandemic, the usual employment safeguard, including common law and application of other federal and state requirements (e.g. Occupational Health and Safety (Commonwealth Employment Act 1991) will continue to apply).

The Department of Employment and Workplace Relation's workplace website www.workplace.gov.au provides further information regarding employment and workplace issues.

For more information on workplace safety that relates to your business in your state or territory, please contact the relevant agency in that state or territory.

WorkCover New South Wales Ph 13 10 50 www.workcover.nsw.gov.au

Victorian WorkCover Authority Ph 1800 136 089 www.workcover.vic.gov.au

WorkSafe WA Ph 1300 307 877 www.safetyline.wa.gov.au

WorkCover Western Australia Ph 1300 794 744 www.workcover.wa.gov.au

Department of Industrial Relations Queensland Government Ph 1300 369 915 www.dir.qld.gov.au

WorkCover Corporation of South Australia Ph 13 18 55 www.workcover.com

SafeWork SA Ph 1300 365 255 www.safework.sa.gov.au

Workplace Standards Tasmania Ph 1300 366 322 www.wst.tas.gov.au

NT WorkSafe Ph 1800 019 115 www.nt.gov.au/deet/worksafe

ACT WorkCover Ph (02) 6205 0200 www.workcover.act.gov.au

Comcare Ph 1300 366 979 www.comcare.gov.au

#### Any risks to employees and others must be reasonable

Any employer or other person who controls the workplace has responsibility for the health and safety of employees (and others there), and to ensure that employees' actions or inactions do not cause harm to others.

Businesses should also note that the Australian Standard for Risk Management (*AS/NZ 4360: 2004—Risk Management*) is promoted in state occupational health and safety laws. For more information visit Standards Australia website www.standards.org.au

Employers must take all practicable steps to mitigate the risk and protect employees, especially those at high risk, such as health care personnel, support staff and first responders (fire, police, ambulance, other emergency workers) from pandemic influenza.

Employers need to actively plan to cover their risks and the risks to their workers and the public.

Statutory requirements relating to the employment relationship and any specific requirements of employment agreements will not be affected by workplace closure in a pandemic.

In the event that the employer decides, or is required, to suspend business during a pandemic, it is important that the employment conditions during the business suspension are discussed with, and made clear to, employees. Those discussions may include, for example, the use of annual leave.

Contractors for services will be subject to their contracts, and contract law generally.

#### Keep communication with staff open and frequent

In all cases, it will be useful to discuss any likely impacts with employees and others that may be affected, beforehand. Whatever agreement and clarification can be achieved before a pandemic will prove a valuable investment should a pandemic occur.

Whether workers decide to come to work depends not only on how serious they perceive the risks to be, but also on how transparent and receptive management have been during pandemic planning and what risk management strategies employers have in place. It will depend upon the effectiveness of the organisation's risk communications.

The more open and frank employers and employees can be with each other about things like the status of their health, their expectations and what decisions are likely to be taken during a pandemic, the better prepared your business will be.

#### Managing fear and anxiety

It is likely there will be anxiety regarding a pandemic and this is likely to contribute to increased work absence and/or increased distress to staff. The suggested ways to manage this include:

- communicate the possibility of a pandemic, and your organisation's preparedness to manage it, very early to staff;
- discuss with staff possible health and safety issues, the potential for stand down, and leave arrangements if they are ill or need to look after children or relatives;
- have a comprehensive management plan in place which is clearly communicated to staff. Ensure that communication management during the pandemic is part of the plan;
- activate your plan—provide clear, timely and pro-active communication to staff, including how your organisation is handling the situation;

- consider establishing a 'communication's tree' so that people can keep in touch; and
- establish a process for contacting staff who have not reported to work and may be ill.

During a pandemic many of your employees will experience fear, grief and anxiety. Trauma and stress can have effects on staff and these will need to be managed. Some issues you might like to think about include:

- staff may suffer from increased fatigue and this may affect work performance;
- conflicts with co-workers may increase because of the added stress; and
- financial concerns from staff may be important to manage.

Be prepared for hostility towards fellow workers who might be perceived to be spreading the virus if they sneeze or cough.

The most important thing employers can do is communicate with their staff and listen to their concerns. Employers can start by encouraging them to discuss how they have been affected by what is happening around them and can work with staff, where possible, to alleviate worries and concerns.<sup>2</sup>

## Supporting staff and their families

During a pandemic your staff will likely be concerned and preoccupied about the wellbeing of their families. Their commitment, or ability, to work may not be their major concern.

In many cases, childcare centres and schools may be closed temporarily and parents will need to stay at home to care for their children. Consider how you might be able to assist essential workers who are needed at work, with childcare arrangements. Consider their needs to have regular contact with their families to ensure they are safe and well (e.g. providing periods during the day they can go home to check on their family.)

Staff may also have family members who are ill and need to be cared for at home. Consider if there is any support or assistance you are able to offer.

Many larger businesses may already have access to counselling services, which would be an essential element of business recovery following a pandemic. Consider how your business would benefit from such services.

## Step 7: Test your plan and know when to activate it

Once you have developed your continuity plan to help prepare your business for a possible pandemic, it is worthwhile to test your plan. This way you will know how well it might work in a real situation and if you have overlooked anything. The scenarios at Appendix B might assist in this regard.

The Australian Government will advise the public of any changes to the pandemic phase and this may signal the need to activate business continuity plans or specific actions in those plans. (see Appendix A check list.) Having well rehearsed plans in place can help you know when to activate all, or some sections, in your business continuity plan.

<sup>2</sup> http://www.mentalhealth.samhsa.gov/cmhs/traumaticevents/default.asp The Federal Center for Mental Health Services, U.S. Department of Health and Human Services.



## **Basic precautions**

Some of the most basic measures can have the greatest effect in helping protect your staff from illness. Personal hygiene (such as hand washing, covering your nose and mouth with a tissue when coughing or sneezing, throwing the tissue in a bin and washing your hands afterwards), work place cleaning (rigorous cleaning of all hard surfaces in the workplace), personal protective equipment, shutting down public drinking fountains, social distancing or avoiding contact with others, restricting staff travel, restricting work place entry and screening workers, are all strategies aimed at keeping your staff healthy.

This section offers guidance on these basic precautions and refers to examples of notices, posters and other information that are included in Appendices C & D for your convenience and use in the workplace. (More information on infection control is also available on the Department of Health and Ageing website www.health.gov.au/pandemic)

## Practice good personal hygiene

#### Hand washing

- Adopt good hand washing/hand hygiene practices, particularly after coughing, sneezing or using tissues.
- Immediately dispose of used tissues.
- Keep hands away from the mucous membranes of the eyes, nose, and mouth.
- Ensure that adequate supplies of hand hygiene products are available. (This is a high planning priority as there may be interruption to the supply or shortages of soap and hand towels.)
- Have a supply of tissues available and provide no-touch receptacles for used tissue disposal.
- Consider having conveniently located dispensers of alcohol-based hand rub.
- Provide soap and disposable towels for hand washing near sinks.

#### The most important thing you can do to prevent illness is WASH YOUR HANDS REGULARLY

Influenza can be transmitted by indirect contact from hands and items that have been in contact with an infected person or contaminated surfaces. By frequently washing your hands you can wash away any germs from these sources. This is especially important before you eat.

Hand hygiene includes both hand washing using soap and water and the use of alcoholbased products (gels, rinses, foams) containing an emollient that do not require the use of water.

• If your hands are visibly soiled with respiratory secretions, you need to wash them with soap (either plain or antimicrobial) and water. It is best to wash your hands with soap and warm water, scrubbing your wrists, palms, fingers and nails for ten to fifteen seconds. Rinse and dry with a clean, dry towel.

- In the absence of visible soiling, alcohol-based products for hand disinfection may be preferred. They dry the skin less and may be more convenient.
- Always wash your hands after contact with other people and after removing a mask or gloves if you have been wearing them.
- You should ensure you have facilities for people to wash their hands frequently. This includes sinks with warm and cold running water, soap (plain or antimicrobial) and disposable paper towels. You may also wish to have alcohol-based disinfectants available.

Hand and personal hygiene information should be communicated to staff and visitors. This might include hygiene notices posted in entrances to washrooms, hand washing stations and public areas. (The posters at the back of this guide may be used for this purpose.) Use brochures, newsletters, global emails, employee notice boards, and staff newsletters to inform employees of the importance of personal hygiene during a pandemic.

Examples of notices and posters illustrating effective methods of hand washing are included at the back of this guide. Another good source of notices and brochures is the Department of Health and Ageing's pandemic resource kit which can be found at http://www.health.gov.au/internet/wcms/publishing.nsf/Content/phd-pandemic-resources.htm This website also includes a DVD showing how easily influenza can be spread by coughing and sneezing.

#### Coughing and sneezing

- Cover nose and mouth when sneezing and coughing (preferably with a disposable single use tissue).
- Dispose of tissues in the nearest waste receptacle after use. Do not store them in your pockets.
- Wash your hands after coughing or sneezing or touching used tissues.
- Consider putting up signs about cough and sneeze etiquette such as those included at the back of this guide.

## Workplace cleaning

During a pandemic, you will need to implement additional measures to minimise the transmission of the virus through environmental sources, particularly hard surfaces (e.g. sinks, handles, railings, objects and counters). Transmission from contaminated hard surfaces is unlikely, but influenza viruses may live up to two days on such surfaces.

Increased cleaning regimes may need to be introduced. Influenza viruses are inactivated by alcohol and by chlorine. Cleaning of environmental surfaces with a neutral detergent followed by a disinfectant solution is recommended. Surfaces that are frequently touched with hands should be cleaned often, preferably daily. The table on page 34 suggests the appropriate choice and concentration of disinfectants.

It is important to practice infection control even if a person does not have symptoms of the flu. Remember a person may be infectious before symptoms occur and others may have only very mild illness with few symptoms. The Infection Control Annexe of the Australian Health Management Plan for Pandemic Influenza<sup>3</sup> gives more details of the types of detergents to use for disinfection and ways to practice infection control in many different settings.

Staff should be reminded not to share cups, dishes, and cutlery and ensure they are thoroughly washed with detergent and hot water after use. Use of water fountains may also pose a risk.

Removing magazines/papers from waiting rooms and common areas (such as tea rooms, kitchens) is also a good precautionary measure.

When a person with suspected influenza is identified and has left the workplace, it is important that their work area/office, along with any other known places they have been, are thoroughly cleaned and disinfected.

Among other things, planning should identify the basic hygiene practices to be followed by cleaners, protocols for the use of personal protection equipment (if recommended) and methods for waste disposal.

Workplace Cleaning Products		
Disinfectants	Recommended use	Precautions
Detergent and water		Leave to dry.
(If there is the possibility of the virus remaining after cleaning, use Sodium hypochlorite—1,000 parts per million of available chlorine, usually achieved by a one in five dilution of	Disinfection of material contaminated with blood and body fluids.	(If disinfectant is used, it should be used in well-ventilated areas.
		Protective clothing required while handling and using undiluted bleach.
		Do not mix with strong acids to avoid release of chlorine gas.
hospital grade bleach.)		Corrosive to metals.)
<b>Granular chlorine</b> e.g. Det-Sol 5000 or Diversol, to be diluted as per manufacturer's instructions.	May be used in place of liquid bleach, if it is unavailable.	Same as above.
<b>Alcohol</b> e.g. Isopropyl 70%, ethyl alcohol 60%.	Smooth metal surfaces, tabletops and other surfaces on which bleach cannot be used.	Flammable and toxic. To be used in well-ventilated areas. Avoid inhalation.
		Keep away from heat sources, electrical equipment, flames, and hot surfaces.
		Allow it to dry completely.

## Air conditioning

There is scientific and medical evidence to suggest that influenza can spread in internal spaces that are not adequately ventilated. All internal spaces should be well ventilated, preferably by fresh air via opening windows, or otherwise by properly designed and maintained air-conditioning systems.

3 www.health.gov.au/pandemic

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 comply with *Australian Standard AS 1668 Part 2*.

In certain situations, it may be beneficial to allow fresh air into the internal space.

Influenza survives longer, and is more easily transmitted, in conditions of low temperature and low humidity.

## **Personal protection equipment**

In some instances, the Department of Health and Ageing may suggest that use of personal protective equipment is advisable. The most commonly used equipment would be masks and protective barriers.

#### Using masks

People with respiratory infection symptoms should use a disposable surgical mask to help prevent exposing others to their respiratory secretions. Any mask must be disposed of as soon as it becomes moist or after any cough or sneeze, in an appropriate waste receptacle, and hands must be thoroughly washed and dried after the used mask has been discarded.

#### **Protective barriers**

Protective barriers in the form of Perspex or glass may provide useful protection for people such as front counter staff or public transport drivers, whose duties require them to have frequent face-to-face contact with members of the public where social distancing is either not possible or not practical.

For more detailed information on personal protective equipment, particularly for businesses operating in the health environment visit the Department of Health and Ageing website www.health.gov.au/pandemic A series of resources is available at this site.

## Social distancing—reducing contact with others

Another strategy to protect staff is minimising their contact with others. Crowded places and large gatherings of people should be avoided, whether inside or outside. Because the virus can travel up to one metre when someone sneezes or coughs, a distance of at least one metre could reduce the propensity to be infected. Visiting or other contact with, unwell people should be avoided wherever practicable.

Suggestions on how to minimise contact include:

- avoid meeting people face to face—use the telephone, video conferencing and the internet to conduct business as much as possible—even when participants are in the same building;
- avoid any unnecessary travel and cancel or postpone non-essential meetings/ gatherings/workshops/training sessions;

- if possible, arrange for employees to work from home or work variable hours to avoid crowding at the workplace;
- practice shift changes where one shift leaves the workplace before the new shift arrives. If possible, leave an interval before re-occupation of the workplace. If possible, thoroughly ventilate the workplace between shifts by opening doors and windows or turning up the air-conditioning;
- avoid public transport: walk, cycle, drive a car or go early or late to avoid rush hour crowding on public transport;
- bring lunch and eat it at your desk or away from others (avoid the cafeteria and crowded restaurants). Introduce staggered lunchtimes so numbers of people in the lunch room are reduced;
- do not congregate in tearooms or other areas where people socialise. Do what needs to be done and then leave the area;
- if a face-to-face meeting with people is unavoidable, minimise the meeting time, choose a large meeting room and sit at least one metre away from each other if possible; avoid shaking hands or hugging. Consider holding meetings in the open air;
- set up systems where clients/customers can pre-order or request information via phone/email/fax and have the order or information ready for fast pick-up or delivery; and
- encourage staff to avoid large gatherings where they might come into contact with infectious people.

## **Restricting staff travel**

The Department of Foreign Affairs and Trade (DFAT), in conjunction with the Department of Health and Ageing, will publish appropriate travel advisories for Australians travelling to other countries infected by the pandemic on their website www.smartraveller.gov.au/zw-cgi/view/TravelBulletins/Health\_:\_Avian\_Influenza

DFAT will also provide advice for Australian Government staff and other Australians in infected areas overseas.

Once a pandemic is recognised in a country, that country may close its borders and similarly, Australia may look at invoking quarantine measures, or other restrictions, for all incoming passengers and aircrew from that country.

It is possible that all incoming passengers may be required to complete quarantine for a period equivalent to the estimated incubation period of the virus—this could be up to one week. Members of the household of the person who is in quarantine, who have an infected person in the home, will be in quarantine for seven days.

If your staff travel overseas for business reasons, your plan will need to include consideration of their management in the event of a pandemic. For example, on declaration of a pandemic, people who arrive from a country affected by pandemic influenza will be asked to go into home quarantine. This will be for three days. They will be given information on what to do if they develop symptoms and who to contact. It is likely that they will receive a phone call from the public health authorities on a daily basis to monitor the situation. Check on staff members during their absence from work and set up a process for ensuring that employees have completed the required time in quarantine and are healthy before allowing them to return to work.

## **Restricting workplace entry**

On declaration of 'Pandemic Phase Aus 6a' (see page 11), your business should consider putting up notices (at all workplace/facility entry points, advising staff and visitors not to enter if they have influenza symptoms).

Employees should be advised not to come to work when they are feeling unwell, particularly if they are exhibiting any influenza symptoms. (See poster at the back of this guide.)

Unwell employees should also be advised to see a doctor. Workers who are ill should stay at home until symptoms resolve. At the same time, you may wish to provide them with further information about how to stay well during an influenza pandemic (e.g. by distributing the information provided on the Department of Health and Ageing's website www.health.gov.au/pandemic).

In your pandemic planning, set up a process for ensuring that ill employees have completed any required quarantine period and are healthy before allowing them to return to work.

Staff who have recovered from the pandemic influenza are unlikely to be re-infected (they will have natural immunity) and should be encouraged to return to work as soon as they are well.

## Annual influenza injections

While the annual flu shot won't combat the human influenza pandemic virus it may be a useful preventative measure in helping keep staff healthy and keeping the health system freed up to cope with a potential pandemic. Businesses may like to consider encouraging staff to receive an annual flu shot.

## Screening workers and managing staff who become ill at work

Your pandemic plan should indicate how your business would manage staff who report symptoms or become ill at work.

It is, however, important to know the difference between influenza symptoms and a common cold. Because colds and the flu share many symptoms it can be difficult to tell the difference between them based on symptoms alone. In general, the flu is worse than the common cold and symptoms such as fever, body aches, extreme tiredness, and dry cough are more common and intense. Colds are usually milder than the flu. People with colds are more likely to have a runny or stuffy nose. Colds generally do not result in serious health problems such as pneumonia, bacterial infections or hospitalisations.

Anyone who becomes ill at the time of a pandemic should be referred for medical assessment according to the state health authorities' and the Department of Health and Ageing's guidelines.

The Influenza Manager might be the best contact point for advice of such illness. They should avoid visiting this person where possible and manage the situation over the phone.

- If the employee does have symptoms that match some of those listed above, they should be treated as a 'suspect case.'
- The employee should be informed where they can find a surgical mask and instructed to wear it immediately. This is to help protect other staff.
- The employee should leave work and immediately contact a health professional by telephone in the first instance. This may involve phoning the person's normal doctor or nurse, or a specially designated centre to seek further advice. The employee's manager should be informed that the person has left work (workplaces may like to consider an isolation room for staff too sick to leave of their own accord and arrangements for transport home).
- The employee, should, if at all possible, avoid public transport when leaving work.
- The employee's workstation should be cleaned and disinfected.
- Any person the affected person has been in direct contact with should be identified.
- Then those people should be advised they have been in contact with a person suspected of having influenza.
- Those people should be asked to go home, and stay at home until advised otherwise.

Your Influenza Manager may like to set up a system to manage the absence and return to work of the employee and the people with whom they have been in contact. Some issues to consider include:

- advising the employee how long to stay away from work;
- deciding on the leave policy and associated arrangements;
- checking on the staff member during his/her absence from work. This will facilitate treatment, contact tracing, etc., if they become ill;
- ensuring the employee is healthy before allowing them to return to work; and
- encouraging staff to return to work once they are well.

#### What if employees become ill at work during a pandemic?

If a person has a fever or becomes unwell at work then the person should be referred, as soon as possible, to a General Practitioner (GP) for medical assessment.

Any unwell person should be kept at least one metre from others.

You, or your company medical officer/adviser (if you have one), should familiarise yourselves with state or local health authority plans for reviewing possible cases of pandemic influenza, which may include specialist fever clinics or designated general practices.

People who are unwell should not return to work until they have fully recovered and have received medical advice that they can safely return to work.

Work colleagues who have been in close contact with a person who has become unwell, should be advised to monitor their health and to be medically assessed by a GP, if they become ill.



## Communication

Part of your business continuity plan should examine how you can best communicate your preparedness for pandemic influenza.

Reassuring your customers and stakeholders that you have plans in place to protect workers, customers and the community will assist in establishing consumer confidence

You should also consider communicating the nature of your plans to your customers. This may include advising of your decisions to minimise face-to-face contact or to close during a pandemic, your intention to improve remote client interfaces, your policies for clients with special needs, and your plans for recovery.

When planning, keep in mind that most health messages for your customers will be the same as those for your staff (see Chapter 6).

## Duty of care to your customers

Duty of care requires everything 'reasonably practicable' to be done to protect the health and safety of your customers.

'Reasonably practicable' means that the requirements of the duty vary with the degree of risk of a particular activity or environment which must be balanced against the time, trouble and cost of taking measures to control the risk. It allows the duty holder (i.e. the business owner) to choose the most efficient means for controlling a particular risk from the range of feasible possibilities.

Businesses should take reasonable steps to ensure that their customers are provided with as much assistance as possible, including during a pandemic, without exposing others to risk.

In the case of businesses whose client base is international (e.g. tourism businesses), all visitors to Australia during a pandemic will have access to the same assistance and conditions as Australian citizens.



The information below and the appendices on the following pages provide a range of information sources, checklists and other information to assist businesses with their preparations.

## **Online Resources**

- The Department of Industry, Tourism and Resources has more information about continuity planning for business and some helpful links to other sites. Visit www.industry.gov.au/pandemicbusinesscontinuity
- The Department of Health and Ageing has a range of information and resources for pandemic influenza.
   Visit www.health.gov.au/pandemic
- Much of this business continuity guide was based on the New Zealand Planning Guide for Pandemic Influenza. This document can be found on the New Zealand Ministry of Economic Development website.
   Visit www.med.govt.nz/templates/ContentTopicSummary\_\_\_\_14451.aspx
- The Fluready website hosts a copy of *Avian Influenza and Business Continuity Management—An Australian Perspective* plus planning tools for Avian Influenza. Visit www.fluready.net
- The Word Health Organization has information on pandemic phases and other global information.
   Visit www.who.int/csr/disease/avian influenza/en/index.html
- **Vancouver Coastal Health** has a variety of valuable information and business planning tools on its website such as the *Regional Pandemic Influenza Response Plan*. **Visit** www.vch.ca/public/communicable/pandemic.htm
- The United States' *Centers for Disease Control and Prevention* site hosts background information about avian influenza, how it is spread, vaccines, outbreak information, travel advice and professional guidance.
   Visit www.cdc.gov/flu/avian
- The Department of Foreign Affairs and Trade provides regular advice for Australians travelling overseas and updated specific travel advice on avian influenza. Visit www.smartraveller.gov.au
- A Business continuity online newsletter is available for free subscription. Visit www.continuitycentral.com/newslettermanagement.htm

## Hotline

• Department of Health and Ageing Communicable Disease Hotline Ph 1800 004 599 Monday to Friday from 8.00 am to 6.00 pm

## Appendix A—Pandemic planning checklist

The actions listed in this checklist for each phase of the pandemic, if not taken at the recommended phase, should be reconsidered at the next phase. (Smaller businesses may find that some of the planning checklist items are not applicable to their circumstances—see Pandemic Planning Checklist for Small Businesses available at www.industry.gov.au/pandemicbusinesscontinuity)

Actions and considerations at each phase of the Pandemic Management Plan		
Before the pandemic: No circulating animal influenza subtypes in Australia that have caused human to human disease. Current situation in Australia	<ul> <li>Preparations—putting in as much time as you can now will likely pay off, if a pandemic occurs.</li> <li>Establish a pandemic planning team and/or an Influenza Manager for your business to coordinate and monitor influenza pandemic issues and to brief your business' decision makers on relevant developments.</li> <li>Identify your key business activities and rank them in order of importance.</li> <li>Identify your sesential physical, human, and financial resources needed to continue these critical business processes and any interdependencies you have on others (e.g. suppliers and distributors, etc).</li> <li>Develop contingency plans for continuation of the key business activities you ranked as critical, most likely at less than full capacity. In doing this, you should plan for a situation where you might lose 30–50% of your staff at the peak of the pandemic and there may be a 2nd and 3rd wave of absenteeism.</li> <li>Contingency plans might include training staff in alternative roles, making arrangements for staff to work from home, etc.</li> <li>Consider alternative suppliers or stockpiling.</li> <li>Implement effective knowledge management practices—develop standard operating procedures, spread knowledge and skills geographically, capture and store all critical information where it can be easily accessed.</li> <li>As part of developing your Business Continuity Plan consider the following: <ul> <li>the effects of a downturn in business on financial flows;</li> <li>purchasing personal protective equipment and developing a plan for their distribution;</li> <li>measures to contain the spread of the virus by reducing human to human contact in the workplace (manage shift change overs, remote location work or special transport arrangements—mini bus or car pooling);</li> <li>alternative child care arrangements for essential staff (given child care centres may close);</li> <li>establishing a health information line or tapping into the government provided service by the Department of Health and Ageing (DoHA); an</li></ul></li></ul>	

Actions and considerations at each phase of the Pandemic Management Plan continued		
	<ul> <li>Update employee's personal data and contact details including emergency contacts and next of kin.</li> <li>Establish pandemic policies for employee leave, compensation, evacuating employees in and near infected areas, how to deal with those exposed to pandemic influenza and those who become ill (e.g. interaction, control response, immediate mandatory sick leave, etc).</li> <li>Communicate your preparedness planning to your staff and develop protocols for communications with staff during each phase.</li> <li>Prepare to disseminate personnel health information that might reduce the risk of the spread of the virus (e.g. hand washing, sneezing and coughing etiquette, and use of cleaning products).</li> <li>Develop a visitor's policy that would become operational during a pandemic.</li> <li>Undertake other preparations—review and service air conditioning systems to ensure the workplace is well ventilated, enhance IT networks (if required) to ensure they are capable of supporting your contingency plans, such as working from home, and establish mechanisms for staff communication such as web pages and hotlines.</li> <li>Develop staff counselling services or arrange access to these.</li> <li>Review insurance coverage for a pandemic—are you adequately covered for business cessation, voluntary closure, mandatory closure, loss of income, or liability for spread of disease amongst staff? If not, are there alternative insurance providers of this type of coverage?</li> <li>Plan for temporary business closure if your service is not essential.</li> <li>Establish contacts with local, state and federal government and health providers—find out about personal protective equipment, if applicable, and likely availability of health services. Set up ongoing arrangements for essential services sectors.</li> </ul>	
Phase 1 Overseas: No new influenza subtypes detected in humans. An influenza virus subtype that has caused human infection or disease is present in animals overseas. The risk of human infection or disease is considered to be low.	<ul> <li>Businesses involved in using bird products sourced overseas should monitor the situation and establish liaison mechanisms with the Australian Quarantine and Inspection Service (AQIS) and Customs for information about how this situation might affect their business (e.g. feather products, fertilisers, tinned food products, etc).</li> </ul>	

Actions and consideration	ons at each phase of the Pandemic Management Plan continued
Phase 1 Australia: No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection or disease is present in animals in Australia. The risk of human infection or disease is considered to be low.	<ul> <li>Businesses involved in using bird products domestically should monitor the situation and establish liaison mechanisms with the Department of Agriculture Fisheries and Forestry (DAFF), AQIS and DoHA for information about how this situation might affect their business (e.g. fertilisers, feather products, etc).</li> <li>Businesses involved in chicken, duck, wild bird, and egg production (food industry) should follow DAFF, AQIS and DoHA guidelines for personnel protective measures to minimise the possibility of human infection of workers and make themselves aware of the farm biosecurity and disease recognition and reporting requirements for their bird stocks (see www.daff.gov.au/birdflu and www.outbreak.gov.au websites).</li> <li>Businesses that serve fresh bird products—restaurants, cafes, fast food outlets, and delicatessens should ensure all bird meat and products are cooked as per DoHA's instruction to ensure they do not pose a risk for human infection).</li> </ul>
Phase 2 Overseas:	Provide staff likely to travel overseas with information on how to
No new influenza virus subtypes have been detected in humans. However, the presence of a circulating animal influenza virus subtype overseas poses a substantial risk of human disease.	<ul> <li>prevent them from getting ill (e.g. personal health information) and where they may seek medical advice overseas if they feel ill.</li> <li>The human resources area of your firm or the staff travelling (in smaller businesses) should regularly check travel advisories from DFAT at www.smartraveller.gov.au</li> </ul>
Phase 2 Australia:	Businesses that use or sell bird products should regularly check
No new influenza virus subtypes have been detected in humans. However, the presence of a circulating animal influenza virus subtype in Australia poses a substantial risk of human disease.	the National pests and disease outbreaks website www.outbreak.gov.au for the latest information on preventative actions.
Phase 3 Overseas:	Regularly monitor DFAT travel advisories on
Human infections(s) with a new subtype overseas, but no human to human spread, or at most rare instances of spread to close contact.	<ul> <li>www.smartraveller.gov.au</li> <li>Make alternative arrangements for business meetings, other than travel (e.g. video conferencing, online forums, etc) where possible.</li> <li>Continue to provide staff travelling overseas with information on how to prevent them getting ill (e.g. personal health information) and where they may seek medical advice overseas, if they feel ill.</li> </ul>
<i>Current level of alert overseas</i>	

Actions and considerations at each phase of the Pandemic Management Plan continued		
Phase 3 Australia: Human infection(s) with a new subtype in Australia, but no human to human spread, or at most rare instances of spread to a close contact.	<ul> <li>Test contingency plans and containment measures for your business.</li> <li>Start educating staff with personal health messages on display in the workplace.</li> <li>Purchase personal protective equipment, if required.</li> </ul>	
<b>Phase 4 Overseas:</b> Small cluster(s) consistent with limited human to human transmission overseas but spread is highly localised, suggesting the virus is not well adapted to humans.	<ul> <li>Consider restricting non-essential travel overseas, especially to areas with cases of human infection.</li> <li>Staff travelling overseas should be provided with personal health information on hand washing, coughing/sneezing, eating, and provided with masks to lessen the opportunity for infection.</li> <li>Assist staff located overseas by providing information about availability of medication and protective equipment.</li> <li>Consider more stringent controls over access to workplaces in overseas countries.</li> <li>In affected countries (if you have workplaces overseas) consider isolating the air circulation heating/cooling system into discrete areas to avoid contamination, institute additional cleaning and disinfecting (e.g. handrails, door handles, lift controls, telephones, and rubbish bins).</li> </ul>	
<b>Phase 4 Australia:</b> Small cluster(s) consistent with limited human to human transmission in Australia but spread is highly localised, suggesting the virus is not well adapted to humans.	<ul> <li>Consider limiting business travel to areas with cases of human infection, if possible. Use alternative methods of contact with these areas where practicable (phone, video conferencing, online forums, etc). If not possible, ensure staff travelling to those areas are aware of practical measures to reduce the risk of illness and that they know what to do if they become ill away from home.</li> <li>Implement remote work arrangements, in areas where there have been cases of human infection, if viable for your business.</li> <li>Alert staff to the possibility of a pandemic and the actions they should take to reduce the risk of infection.</li> <li>In affected areas, consider isolating the air circulation heating/ cooling system into discrete areas to avoid contamination and institute additional cleaning and disinfecting (e.g. handrails, door handles, lift controls, telephones, and rubbish bins).</li> </ul>	
Phase 5 Overseas: Larger cluster(s) overseas but human to human spread still localised, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	<ul> <li>Arrange for non essential overseas workers to return to Australia, because if the virus spreads quickly and passengers arrivals to Australia are restricted, staff may not be able to return to Australia, at a later time.</li> <li>Essential workers needing to remain overseas should be provided with personal protective equipment, and advised to limit their contact with others, if possible. They should regularly monitor the DoHA, WHO and Centers for Disease Control websites for updated information on how to reduce the risk of being infected.</li> <li>Maintain close contact with staff overseas who have been infected or exposed to avian/pandemic influenzas and provide whatever support is available.</li> </ul>	

Actions and consideration	ons at each phase of the Pandemic Management Plan continued
Phase 5 Australia: Larger cluster(s) but human to human spread still localised in Australia, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	<ul> <li>Pandemic Influenza Manager to communicate latest information from DoHA, WHO and Centers for Disease Control (from their websites) to senior management, and directives to staff.</li> <li>Establish regular staff briefings on developments—may be in writing, online or teleconferencing—to reduce the need for group gatherings.</li> <li>Where possible, implement work from home arrangements, in affected areas.</li> <li>Where possible, reduce staff travel to affected areas, use alternative non face-to-face means to complete activities.</li> <li>In affected areas, introduce restrictions on customer entry to the workplace and install protective barriers to distance any person-to-person interactions, if practicable.</li> <li>Consider closing outlets/offices in affected areas, if critical functions can be performed in other parts of the business.</li> <li>Purchase consumables for an extended period (e.g. health and cleaning products).</li> <li>Prepare rosters for essential workers to meet the needs of critical business processes during Phase 6, including child care arrangements, if necessary.</li> <li>Provide information for at-home care of potentially ill employees.</li> <li>Confirm communications linkages with appropriate government agencies and emergency services.</li> </ul>
Phase 6 Overseas: Increased and sustained transmission in the general population overseas—not in Australia.	<ul> <li>Consider own business viability and be prepared to reduce or suspend work, if the supply chain from overseas is sufficiently interrupted, except for essential services.</li> <li>Be prepared for longer waits for goods imported from overseas and source alternative local products and services, if possible.</li> <li>Support staff overseas, if they are unable to return to Australia (e.g. access to stockpiled goods, information about precautions to take to lower the risk of exposure, etc).</li> <li>For essential service providers all pandemic plans should be well tested and ready to implement at short notice. Assess the ability of critical infrastructure to be repaired or recovered quickly, and how this might be done during Phase 6 in Australia.</li> </ul>

Actions and considerations at each phase of the Pandemic Management Plan continued		
Phase 6a Australia: Increased and sustained transmission in the general population in Australia, but cases are still localised to one area of the country.	<ul> <li>Discourage non-essential workers from going to work in the localised areas of the virus, by encouraging them to take leave.</li> <li>Consider carrying out key business processes at alternative locations to the outbreaks, if possible (noting staff will not be able to move from an infected area to a non-infected area).</li> <li>Cancel all non-essential service domestic travel.</li> <li>Increase social distancing of essential workers (e.g. limit meetings, group morning teas, lunches etc).</li> <li>Isolate the air circulation heating/cooling system into discrete areas to avoid contamination.</li> <li>Institute additional cleaning and disinfecting (handrails, door handles, lift controls, telephones, rubbish bins, etc).</li> <li>Adhere to your personal protective equipment and protective barriers policy for staff in customer interactive roles. Ensure staff know how to correctly fit and dispose of protective equipment.</li> <li>Put in place security arrangements if your business will not continue to operate (does not apply to essential services).</li> <li>Provide health information and direct suspected cases of pandemic influenza to their local GP (via phone in the first instance).</li> <li>Encourage home quarantine of suspected cases.</li> <li>Ensure you have access to finance or alternative arrangements for purchase of essential goods and services.</li> <li>Claim on insurance policies, if appropriate.</li> </ul>	
<b>Phase 6b Australia:</b> Increased and sustained transmission in the general population in Australia and cases are occurring in multiple regions of the country.	<ul> <li>Non-essential workers should be told to stay at home.</li> <li>Establish child care arrangements for children of essential workers in their own homes with pre-screening of carers and children.</li> <li>Essential workers must follow protective equipment policy (e.g. wear properly fitted masks).</li> <li>Provide staff counselling services by phone or remotely.</li> <li>Consider closing your business temporarily (if not an essential service).</li> <li>Secure your site, if operations are suspended.</li> <li>Establish a register of staff who contract the virus and are likely to develop immunity.</li> <li>Plan for business recovery, taking into account possible 2nd or 3rd waves of infection.</li> </ul>	
Phase 6c Australia:	• Encourage immune staff to return to work.	
Increased and sustained transmission in the general population in Australia but the number of cases is subsiding.		
Phase 6d Australia:	• Although immune staff may be protected from the initial strain, a	
The next wave of the pandemic has reached Australia indicated by an increase again in the number of cases.	distancing and personal health preventative measures.	

Actions and considerations at each phase of the Pandemic Management Plan continued		
Recovery Stage Australia Recovery of services to normal.	<ul> <li>Action repair/recovery of critical infrastructure as a matter of urgency.</li> <li>Implement plan for resumption of full business capacity.</li> <li>Seek access to available assistance, if eligible.</li> <li>Arrange vaccines for staff (if available) to provide protection against a possible next wave of infection.</li> </ul>	

## Appendix B—Planning scenarios

The following three scenarios are designed to assist businesses consider a range of possible consequences that might occur during a human influenza pandemic, so that relevant consideration can be included in their business continuity plans. These scenarios are based on a severe pandemic as it is important to plan for the worst case. It is difficult to predict the impact of a pandemic before it arrives and it may be a mild strain that we experience with a lesser impact than proposed in these scenarios.

## Scenario 1—A large hotel is quarantined with a suspected case of human influenza

It is close to the end of the school holiday season in New South Wales. The weather has been unseasonably warm, with many Australian's taking advantage of the last of the warm weather. Anecdotal reports from the tourism industry are calling it one of the busiest school holiday periods for many years.

For several weeks there have been reports of many cases of H5N1 in humans in Italy, France and Greece. At this stage no report of human to human transmission can be confirmed, but Australia's health authorities are monitoring the situation and expecting the World Health Organisation to advise of a shift from Pandemic Phase 3 to 4 overseas.

That same day, a bus load of international tourists from Europe are transported from Sydney Airport to the Central Coast (NSW), for the beginning of a journey which will take them on a tour of Australia's eastern seaboard, ending in Brisbane.

The tourists are booked into a three star hotel that afternoon, and some make their way to their rooms, freshen up, and head to the hotel bar for a refreshment before dinner. Others choose a quick refreshing dip in the hotel pool, but get a bit fed up with all the noisy children, so call it a day and head to their rooms.

The early morning news the next day has announced that the spread of H5N1 has been confirmed between humans and there are more cases than originally identified. WHO is now monitoring the situation before confirming Pandemic Phase 5 overseas.

Most of the guests at the hotel have packed and left their hotel rooms by 10am.

The tour bus is heading for the Hunter Valley for lunch and a tour of some of Australia's best known wineries. After 30 minutes of travelling one of the tourists, who has been complaining of having a terrible headache starts to suffer from terrible chest pain and has an obvious fever.

The tour guide becomes very worried and telephones the resort where his tour group will be staying that night and organises for a local doctor to be available. On arrival that afternoon, the tourist sees the doctor. The doctor suspects human influenza pandemic and arranges for the person to be admitted to the local hospital for tests. The doctor also advises the resort's management to quarantine staff and residents as a precautionary measure and informs local health authorities.

## Scenario 2—Pandemic impacts regional trade and affects the Australian economy without human cases of pandemic influenza in Australia

It is February and six weeks since the first reported outbreaks of H5N1 human-to-human cases were confirmed in Southeast Asia. Transmission of the influenza has now reached pandemic levels in the region, but no cases of human to human transmission in Australia have been diagnosed and border control measures appear to be working.

Australia's economy, however, is being affected by a severe downturn in trade within the region. In particular, imports/exports are disrupted due to an absence of workers in key ports. Absenteeism rates are so high in some key hub ports that they are now finding it difficult to remain operating. This problem is further compounded by merchant ships unknowing arriving in the key affected overseas ports, returning to sea before loading and unloading cargo, due to the fear of crews catching the virus. More than 40 per cent of all merchant ships berthed in Australia are unable to return to their home port.

There has been disruption to manufacturing industries in Southeast Asia. Equally, in Australia, some businesses have been forced to temporarily close without a reliable supply of imported inputs to their products.

There are also significant lags in the provision of some goods to Australia due to the rescheduling and reprioritising of cargo flows across the region, and globally (as Australian companies attempt to source products from alternative sources). There is also some displacement of cargo movements from sea to air cargo as Australian companies seek to rapidly fill the gaps created by the disruption/closure of some regional markets, which is placing an increased burden on the air cargo industry.

In addition, Southeast Asian aviation related industries are suffering. Refuelling, catering and maintenance services are beginning to struggle in a number of countries as their domestic workforce suffers 40–50 per cent absenteeism.

The Department of Health and Ageing and the Australian Quarantine Inspection Service with assistance from Customs has introduced additional screening measures for cargo and crew in all Australian ports (which are similar to those in the air environment). While this may have some impact on cargo flows, business continuity plans are so far keeping the impact of this to a minimum.

Australian consumers are beginning to experience a loss of availability of products while Australian and overseas companies adjust to the changes in cargo flows, shipping and flight schedules and the increased inspection activity associated with some cargo (e.g. refrigerated and/or other food products from high-risk areas). Australian consumers are beginning to stockpile certain products. These changed consumer practices are further contributing to the lack of availability of products in stores.

## Scenario 3—Severe Pandemic in Australia impacts the fuel supply chain

It is mid January. About four weeks ago a H5N1 pandemic influenza broke out in South East Asia. The disease has a high reproductive rate and spreads rapidly. In the last 24 hour, cases have been recognised in Melbourne and Sydney. Based on international experiences, it is anticipated that these cases will spread rapidly around the country.

Some international merchant ships have not left ports for fear of crews catching the virus. Those at sea on their way to Australia when the pandemic broke out have either turned around or berthed in Australia, unable to return to their home port. As such, Australia is now reliant on its domestic crude oil production (extraction) for the production of refined petroleum.

Around 90 per cent of petroleum products consumed in Australia (petrol, diesel, jet fuel, etc.) are produced by local refineries (two in Brisbane, two in Melbourne, two in Sydney and one in Perth). However, 60 per cent of the crude oil used in the refining process is imported, two thirds of which come from Asia. Crude oil production has been diverted to domestic markets, as exporting is now impossible. Through this diversion, Australia has enough domestic production to supply 70 per cent of 'normal' (non-emergency) user demand. However, due to the characteristics of Australia's crude oil production, some sectors are more affected than others (e.g. Australia's crude oil production is less suited to creating heavier refined products like diesel. A national liquid fuel emergency under the Liquid Fuel Emergency Act 1984 has been declared.

Alternate day fuel rationing has been implemented on an 'odds and evens' number plate system where users are allowed 15 litres of fuel at market prices. 'Essential users' (e.g. police, fire and ambulance) have been given priority access to fuel from designated service stations. Other petrol stations have had their hours of operation restricted. Bulk users with a contracted supply only receive 80 per cent of their normal allocations and it is predicted that bulk user allocation will drop as supply tightens. Spot sales for bulk users at the terminal gate (these users do not have a supply contract) have been terminated.

Refineries have adjusted their output to provide more fuel for 'essential users' (e.g. diesel production for police/fire/ambulance and back-up generators). Further, fuel specifications have been lowered in an attempt to increase output (the consequences of this are not yet known). Output is however limited largely by the capacity to change refinery output and the characteristics of Australian crude oil. The situation is complicated by the fact that as part of the petroleum refining process, jet fuel is produced. As international and domestic flights have been reduced, there is now very little demand for this product and environmentally acceptable storage is proving impossible.

Refineries attempt to operate on a skeleton crew as only 50–60 per cent of normal workers are turning up to work. Contingency plans for reduced staff numbers are implemented, but they are still unable to distribute the required products to the public. For example, limited numbers of mini tank drivers are arriving at the terminal gate to deploy fuel to service stations and in any case, service stations are shutting down. As workers' families are affected, absenteeism becomes more widespread and refineries begin to scale back production.

Australian crude oil production begins to fall as companies do not have sufficient staff (who are leaving the rig to be with their families) or supplies to get crude oil to the refineries. While crude oil production from offshore rigs (80 per cent of Australia's onshore production) and onshore crude oil production can be distributed with minimal human-to-human contact, the fear amongst employees about the communicable nature of the disease creates a further distribution bottleneck.

Three weeks pass. Occasional 'brownouts' due to energy infrastructure worker absenteeism or system failure can only be counteracted by back up diesel generators. In some cases, these diesel generators only contain enough fuel to run for a day. Without adequate and accessible supplies of liquid fuels (e.g. deliveries of diesel), major hospitals are not guaranteed continuous access to power and have no contingency mechanism available. These brownouts have also created issues with petrol stations pumping fuel as many do not have any form of back-up power generation and as such are reliant on gravity feeding. Police, fire and ambulance workers (who do not maintain their own reserve stocks and are reliant on the availability of continued supply) are still receiving the product they need through priority rationing, although this is a slow process when gravity feeding is necessary.

Businesses are considering shutting down their refineries and crude oil production rigs as a commercial decision. It will take days to shut down this production safely with a skeleton crew. Further, once shut down, it will be weeks until they can be restarted. Remaining supplies are limited and a second pandemic wave is expected to hit soon.

## Appendix C—Background on previous pandemics

Past pandemics can help us to build a picture of what might happen in a pandemic. Most of the modelling used is based on the Spanish influenza of 1918. This was probably the world's worst pandemic. Planners use this pandemic because it provides the worst case scenario.

Building on this knowledge, DoHA has advised that if a pandemic were to occur in Australia today that affected 25 per cent of the population and there was no pandemic vaccine or treatment available, over a 6–8 week period it could lead to:

- 13,000 44,000 deaths
- 57,900 148,000 hospitalisations
- 2,600,000 7,500,000 outpatient visits.<sup>4</sup>

These figures are estimates only and the likely outcomes associated with a pandemic will depend upon many factors, such as the transmissibility and virulence of the virus, and the availability and success of health and social interventions which would be significantly different than during the pandemic in 1918, and how we prepare for it.

#### Spanish influenza, 1918–1919

The H1N1 influenza virus subtype caused the Spanish flu pandemic of 1918–1919. This pandemic was unprecedented in terms of loss of human life. The illness was notorious for its rapid onset and progression to respiratory failure and death. It is estimated that between 20 and 40 million people died worldwide, with the highest number of deaths in young and healthy persons in the age range of 15 to 35 years. Approximately 25 per cent of the population in the United Kingdom and United States developed the illness. In Australia, it was first notified in Victoria in 1919 and then New South Wales, where hospitalisation rates in Sydney for influenza increased exponentially. The virus retained its preference for the young and healthy in Australia, with 60 per cent of deaths occurring in those aged 20 to 45 years. By the end of 1919, 11,500 Australians had died.

#### Asian influenza, 1957–1958

In 1957 a new H2N2 subtype was reported in Singapore to the World Health Organization. It was a milder virus than the pandemic of 1918–1919 and the world was better prepared. The virus had spread throughout the world by May 1958. Rates of infection were reported to be 20 to 70 per cent, including an estimated 10 to 20 per cent who were infected, but were asymptomatic. Overall, case fatality rates were low, ranging from one in 2,000 to one in 10,000 infections. Mortality patterns more characteristic of seasonal influenza infections were seen, with excess deaths confined to infants and the elderly. The first wave was concentrated in school-aged children and the second wave in the elderly, with an associated higher mortality in the second wave. Quarantine measures were not implemented in Australia during this pandemic as the pandemic spread too fast and far for measures to have any impact.

<sup>4</sup> These projections have used the FluAiD Meltzer model (now FluAid 2.0) developed by the US Department of Health and Human Services National Vaccine Program Office http://www.hhs.gov/nvpo/

#### Hong Kong influenza, 1968–1969

In July 1968, a new subtype, H3N2, emerged in Hong Kong, and caused a pandemic. Thirty years later, H3N2 remains the common influenza agent.

In most countries the disease was less severe with a low mortality rate and slow rate of infection. The relative mildness of this pandemic is thought to be due to some segments of the population possibly having partial protection either against infection or severe disease.

In Australia, mortality rates were similar to those caused by the Asian influenza virus and were greatest in those over the age of 65 years.

## Appendix D—Frequently Asked Questions

## Avian influenza in birds

## Q. What is avian influenza?

**A.** Avian influenza is an infectious disease of birds caused by type A strains of the influenza virus. All birds appear to be susceptible, though some species are more resistant to infection than others. It is also called bird flu.

## Q. Is avian influenza (bird flu) present in Australian birds?

**A.** No. There are no current reports of avian influenza (bird flu) in birds in Australia. Avian influenza has been in Australia in the past and was successfully eradicated from poultry. The last reported case was in 1997 in Tamworth, NSW. Prior outbreaks occurred in commercial poultry farms in Victoria (1976, 1985 and 1992) and Queensland (1994). Australia's Chief Vet reported in February 2006 there is no evidence of H5N1 in Australia based on surveillance of wild birds and investigations of bird deaths. Tests of 1,287 migratory birds were conducted in November 2005.

## Q. What is influenza type A H5N1?

**A.** This is the particular subtype of influenza virus that is causing the current epidemic of bird flu in overseas countries. The letters and numbers allow scientists to differentiate between different subtypes of influenza.

## **Q**. What is Australia doing to prevent avian influenza from entering the country?

**A.** The Department of Agriculture, Fisheries and Forestry has increased surveillance at airports, seaports and mailing facilities. Quarantine and border staff have been alerted to look out for live birds and bird related products entering Australia from countries where there has been an outbreak of avian influenza. They have also been issued with instructions on precautions necessary to protect themselves in their work.

## Q. Do we import live or raw chickens into Australia?

A. No. Australia does not import live chickens or any raw chicken products.

## Q. Do we import eggs for consumption into Australia?

**A.** Australia does permit the importation of cooked, retorted (i.e. commercially sterilised) eggs as well as a number of other products containing egg. Only eggs and egg products that do not pose a risk of introducing exotic diseases, including avian influenza, are permitted entry into Australia. All imported and domestic egg products must be pasteurised.

## Q. Is it safe to eat eggs?

**A.** Yes. Egg shells may have been contaminated with bird faeces. All eggs should be washed before sale but it is prudent to apply careful hygiene when handling an egg such as: washing the outside of eggs or washing hands after handling an egg. Eggs should not be separated into yolk and white by bare hands. Proper cooking of eggs is recommended. Particular care needs to be taken with foods that contain eggs that are not cooked such as mayonnaise and mousse.

## Q. Do we import cooked chickens into Australia?

**A.** A minimal amount of cooked product is imported. Any imported chicken product must be cooked to temperatures that kill the virus before it is imported into Australia. It is not possible for someone to catch avian influenza from appropriately cooked food.

## Q. Can I catch H5N1 from eating chicken, duck, turkey or other cooked birds?

**A.** No, you cannot catch H5N1 from properly cooked poultry (or eggs) such as chicken, duck, or turkey.

## **Q.** Is it dangerous to purchase goods made of feathers (e.g. pillows and doonas)?

**A.** If the goods are made in Australia, then there is no risk, as the H5N1 strain is not present in Australia. If the products are made from overseas inputs from an H5N1 affected country, there may be some risk associated with doona and pillows, depending on how the materials are processed during manufacturing.

## Q. Are there any restrictions on bird products (locally or imported products)?

**A.** The are no restrictions on locally produced products as the H5N1 strain of avian flu is not present in Australia. In the case of imported product, the conditions we place on imports vary depending on the product and where it is from. The conditions range from total bans to necessary treatment measures before an item can be imported. Information relating to requirements is available on the AQIS website http://www.aqis.gov.au/icon32/asp/ex\_alertscontent.asp, the ICON database lists all the conditions for different products and countries.

## Q. I have domestic birds. How would I know if my domestic birds have avian influenza?

**A.** The Department of Agriculture, Fisheries and Forestry web-site www.daff.gov.au provides information on the symptoms of avian influenza in birds.

## **Q**. I work in an industry where I may be exposed to live chickens or poultry products. Do I need to take any special precautions?

**A.** Avian influenza has not been reported in Australia in bird flocks at this time, so people working in these industries do not need to take any additional precautions at present. The Department of Agriculture, Fisheries and Forestry web-site www.daff.gov.au provides information on what to do in the event you suspect an outbreak of avian influenza.

## Avian influenza and humans

## Q. Can avian influenza infect people?

**A.** It is currently very difficult for the H5N1 virus to be transmitted from birds to humans (it requires very close contact with sick or dead birds) but in those cases where it has been transmitted, it has caused severe illness and the death rate has been high.

## Q. What is an influenza (or flu) pandemic?

**A.** An influenza pandemic is a disease outbreak that occurs worldwide when:

- 1. a new strain of influenza virus emerges, to which no-one is immune;
- 2. the virus causes disease in humans; and
- 3. the virus is easily spread between humans.

In the absence of immunity, a new influenza strain can spread rapidly across the globe, causing worldwide epidemics or a pandemic, with high numbers of cases and deaths.

## Q. What are the symptoms of pandemic flu?

**A.** The exact symptoms of a pandemic strain of flu will only be known at the time of the pandemic. Based on previous pandemics, experts predict that the symptoms of pandemic flu will be the same as the seasonal flu virus. For example, sudden onset of high temperature, muscle aches and pains, tiredness, cough, sore throat and a stuffy or runny nose.

## Q. How long do symptoms take to develop and how long do they last?

**A.** It may take 2 to 7 days to show symptoms when you catch the flu and the symptoms may last for up to a week.

## Q. Who is at risk from pandemic flu?

**A.** A pandemic flu virus that emerges 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 death rates.

## Q. What should I do if I think I have avian flu symptoms?

**A.** Many people get respiratory infections every day and the probability that your symptoms are from avian influenza is extremely low. If you have just returned from affected countries overseas and you are experiencing a fever, body aches, extreme tiredness, or a dry cough, you should seek medical advice advising your doctor of your recent travel and activities, including any visits to farms or markets in Asia/Europe. Remember your symptoms are highly unlikely to be caused by avian influenza.

## Q. How is avian influenza different from normal influenza?

**A.** The main difference is the source of transmission of the virus that is, from infected birds to humans. There is very little difference in the symptoms (though these may vary in severity) or treatment of the virus.

## Q. How does pandemic flu spread?

**A.** Pandemics of flu are spread from person to person by respiratory secretions in three ways:

- 1. through spread of droplets from one person to another (e.g. coughing/sneezing);
- 2. by touching things that are contaminated by respiratory secretions and then touching your mouth, eyes or nose; and
- 3. through spread of particles in the air in crowded populations in enclosed spaces.

## Q. How is avian influenza spread to humans?

**A.** People need to have close contact with infected birds or poultry manure to get avian influenza. The virus is found in bird faeces and respiratory secretions. There is no evidence of effective human transmission of the virus at this time.

## Q. Can avian influenza be treated with antibiotics or other drugs?

**A.** There are medications that are effective against the avian influenza virus in people. Sometimes people with influenza develop secondary bacterial infections and these can be treated with antibiotics.

#### Q. Are children at greater risk of catching avian influenza?

**A.** Probably, yes. The current cases of avian influenza in humans are predominantly in children. This may be because children are more likely to have close contact with chickens and chicken faeces.

## **Q.** If I was exposed to avian influenza in birds, how long would it take for me to become sick?

**A.** The exact incubation period for avian influenza in humans is not known because there have been so few cases, but is probably between 3–7 days.

## Q. Can avian influenza kill?

**A.** Unfortunately, yes. While millions of birds have died from the disease only a few people have acquired the illness, a significant number of these people have died.

## Q. Will the current influenza vaccine protect me against avian influenza?

**A.** No. The current vaccine for human influenza does not prevent avian influenza infection in people. However, in countries overseas, people exposed to bird flu will be immunised to protect them from human strains of influenza, to help prevent the emergence of a mixed human/avian influenza virus.

## Treatments

## Q. How is pandemic flu treated?

**A.** The mainstays of treatment include rest, ensuring adequate fluid intake and nutrition and taking medications to help with fever and pain such as aspirin (but not in children) and paracetamol. Complications, such as bacterial pneumonia, can develop in some people and can be treated with antibiotics. Those who are severely affected may need hospitalisation, supplemental oxygen therapy and respiratory support through artificial ventilation.

## Q. What about antiviral medications?

**A.** The effectiveness of antivirals in the treatment of pandemic influenza is unclear. The Government's strategy for use of antivirals as part of a pandemic response is set out in Appendix 1 of the *Australian Health Management Plan for Pandemic Influenza*. The Australian Government has developed a significant stockpile of the antivirals which will be used for prevention and treatment with the aim of minimising the overall sickness and death in the population. However, it is important to recognise that antivirals can only be used as one part of a broader response to a pandemic, and that they need to be used strategically because stocks are limited, and because of the danger of the virus adapting to them.

## Q. What about vaccines during a flu pandemic?

**A.** A vaccine that gives good protection against a pandemic virus can only be developed after that virus strain appears. Such a vaccine may take several months to develop and produce. The Australian Government has arrangements in place to develop a vaccine against a pandemic influenza virus as soon as such a virus emerges.

The seasonal flu vaccine will not protect against pandemic flu. 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 advice about whether you should receive these vaccines and there is information available on the Department of Health and Ageing website (www.health.gov.au). The Australian Government has signed contracts with two vaccine manufacturers to ensure that enough pandemic vaccine for all Australians will be produced in the event of a pandemic. However, the vaccine may take 3–6 months to produce, and initially will be in short supply. Once sufficient pandemic vaccine has been produced, all Australians will be able to receive the vaccine.

## **Prevention and control**

## Q. How can I protect myself and others from pandemic flu?

**A.** Short of a vaccine, there are many simple ways people can substantially reduce their risk of being infected by or spreading the influenza virus. These include:

- maintaining a physical distance from people who might be infected;
- frequent hand washing, particularly after coming into contact with people who might be infected;
- cough and sneeze etiquette;
- staying home from work when unwell, and encouraging colleagues to do so; and
- in the event of a pandemic, wearing a simple surgical mask or other covering for the nose and mouth.

# Q. What measures are being/will be implemented to screen travellers, students and business people arriving from overseas areas of concern for Avian Flu? There have been media reports of screening occurring at airports.

**A.** Bird and poultry products including eggs, egg products, chicken and duck meat, and objects contaminated with faeces from infected animals can carry diseases such as avian influenza. These products are not permitted into Australia. The Australian Quarantine and Inspection Service (AQIS) has a 100 per cent screening policy (either by detector dogs, x-ray or physical inspection) of all bags from all flights from targeted high-risk avian influenza countries. Quarantine officers at seaports are also on permanent alert for poultry products and all international mail is being screened.

## **Q.** Could a traveller, a student or businessperson become infected with the virus and bring it into Australia?

**A.** This is very unlikely. At this time the virus has not been shown to spread easily or rapidly among humans. There have been few human cases. Travellers who become sick or feel unwell with respiratory or flu-like symptoms on their return should seek a medical assessment with their personal physician. Travellers should inform their doctor, without being asked, where they have travelled overseas.

## Q. I am travelling to Asia. What should I do to protect myself from avian influenza?

**A.** Although the risk of infection to travellers to areas affected by avian influenza is currently considered low, Australians travelling to areas affected by avian influenza can reduce their risk of infection by avoiding situations where they may have contact with farms and live bird markets, and ensuring all uncooked poultry and eggs are handled hygienically with careful attention to hand washing after handling. Proper cooking destroys the virus in poultry and eggs.

Australians travelling to or residing in an affected country should keep up to date by regularly checking the Department of Health and Ageing website at www.health.gov.au and the Department of Foreign Travel Bulletin at www.smartraveller.gov.au

## Q. How can the virus be killed?

**A.** Heat over 70 degrees Celsius for 30 minutes will kill the virus. At 80 degrees the virus is killed in one minute. Good hygiene by hand washing and cleaning of surfaces will remove the virus.

#### Q. How will I know if a pandemic has reached Australia?

**A.** The Australian Government Department of Health and Ageing, is closely monitoring the situation overseas. Australia has a robust surveillance system and strong measures in place at international borders to give us maximal warning of the pandemic reaching Australia. If a pandemic occurs, it will be announced by the Government following advice to the Prime Minister from the Chief Medical Officer and the Minister for Health and Ageing. The Department's communications strategy for informing the public about the level of threat and the action that needs to be taken (including by individuals) will be stepped up.

## Q. If I get pandemic flu will I be put in quarantine?

**A.** Depending upon the severity of disease, 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 (i.e. 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.

## Q. How long would people be quarantined for?

**A.** Based on the current bird 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.