

## Preparing for Pandemic Influenza

Thanks to Dr Melvin A Brieseman, Medical Officer of Health, Community & Public Health Canterbury District Health Board

Influenza epidemics have occurred at the rate of three every 100 years for the last several centuries. Whether the next one will be due to the avian strain is not certain, (although it is currently the top candidate) but preparedness for the next pandemic is valuable in any case.

Many people have looked at Y2K and SARS and feel that an avian influenza pandemic will be a similar non-event. These people overlook the fact that Y2K and SARS were non-events because we were prepared and similarly avian flu could be negligible in its impact if proper planning occurs.

Based on the 1918 pandemic (the closest thing that has been of similar nature), the following is a table of the likely casualty levels.

Table 1 Canterbury (based on 1918) The numbers of individuals involved will be:

	Pandemic Total	Biggest Weekly Total
Ill	255,585	59,481
Ill at home	153,351	35,689
Need assisted care	76,676	17,844
Hospital level care	25,559	5948
Deaths	3892	1190

Based on these figures there would be health service overload for both hospital and general practice and considerable community disruption.

Using the same basis it has been estimated that the economic losses today would be \$8,595,000,000 based on the deaths alone. Thus such a pandemic is not just a health services issue, it is a total community matter and there needs to be a whole of society approach at every level.

High level Planning is already occurring at many levels:-

- International - by the World Health Organisation.
- National - there is a whole of government approach to planning.
- Airport & Port - to control of entry of infected persons.
- Health - health services planning at central and local levels.
- Civil Defence - preparation for welfare and emergency services.

Most important however, are the preparations that are required at a more basic level including both business and personal readiness.

## Personal Preparedness

The preparations at a personal level can be summarised as the Six S's. They are:

1. Stock up: Have a good supply of food and normal medicines on hand including paracetamol.
2. Separate: Keep your distance (at least 1 metre) from other people.
3. Smother coughs and sneezes: Use a tissue, handkerchief or in extreme, your hand.
4. Soap up: In other words wash your hands. Influenza viruses like other viruses and bacteria get on to your hands either directly or from contaminated objects but washing properly will remove them.
5. Stay home: If you are unwell don't go out. You need the rest and neither the boss nor your friends will welcome your spreading the disease around.
6. Self-help: Be prepared to look after yourself, others may not be available to.

## Business Preparedness

There are a number of things that a business should be doing to prepare. It is likely that there will be large numbers of people who will not be able to get to work. Estimates are that 40-60% absenteeism will occur, partly because of being ill themselves or because they have to stay home either to take care of ill family members or because schools and child care facilities are closed as a means of limiting the spread of disease.

A Business Continuity Plan is therefore essential. Businesses need to have in place a system that will allow them to continue operating with reduced staff levels. This may mean cancelling or postponing some activities or reducing services so that a lesser number of staff is required.

It is also essential that key personnel have some backup. This may mean having extra staff trained or having some other alternative.

Ensure that you have adequate supplies on hand. Alternative suppliers of either material or services would be a prudent means of ensuring continuation of your business should one of your contractors 'fall over'. There is a tendency for 'just in time' operations to be practised. This could prove fatal to a business in an epidemic situation. In addition, if you have staff involved in emergency response situation, you may need to plan to have that involvement continued for several weeks.

Employment policies: Appropriate policies will need to be in place to suit a pandemic situation. These will include:-

Exclusion policies: If those who are ill are not excluded from work, the disease will rapidly spread throughout the rest of the staff. There may also need to be a policy in some situations to provide travel advice or control travel to infected areas and possibly exclude those who have returned from such areas until it is sure they are free from the disease.

Sick and temporary leave policies: If staff feel under pressure to come to work when they are ill because they have no sick leave entitlement remaining, this again will merely spread the disease to the rest of the staff. And if there is a policy to exclude those who are sick, then some legitimate means of dealing with this is required, and special sick leave would seem to be the best way of doing this.

Care of family members and for bereavement: It is likely that staff will need to take time off to cope with family who are sick at home or unable to be cared for because of closed schools and child care. Unless a policy is in place to cover this, then it could prove an incentive to mass non-approved leave.

Over-time: Because of a shortage of staff there could be a need for unaccustomed overtime that requires appropriate institution.

Work from home: In some situations it may be possible for some employees to work from home. Provision will need to be made for this in advance of any pandemic.

Sickness and care: Although not a direct responsibility of an employer, it would be worthwhile setting up a system which ensures that staff who are absent have the appropriate care that they need. Much of the need in pandemic situation will be for some form of social support (eg in a neighbourhood watch type situation), efforts on the part of employers to ensure that their staff are cared for would assist a safe and speedy return to work.

#### Occupational Safety and Health for Staff

Staff Awareness: Staff are more likely to trust employers and turn up for work if they feel they are being adequately provided for. The major factor in building this trust is to keep them advised as to what is being done to prepare for an eventuality such as a pandemic.

Advice on home and family readiness along the lines of personal preparedness (the Six S's above) would be part of the preparation. Such readiness would assist in their being able to care for themselves and their family – the first step in any emergency situation.

Plan routine annual staff immunizations: Although the normal influenza vaccine is unlikely to provide protection against avian influenza, this is not absolutely certain. There is however value in maintaining an annual flu vaccination campaign in a work place. It is cost effective in itself and it avoids adding the normal influenza outbreaks to a pandemic variety thus both duplicating absenteeism and causing confusion as to which disease is causing problems.

Personal protective equipment: The nature of any personal protective equipment required will depend on the nature of the job and the likelihood of exposure. Masks are certainly essential for those who are going to be exposed to sick persons as part of their job – nurses, ambulance staff etc, and advice as to whether it should be the staff and or the patient is available in appropriate settings. In most employment situations masks should not be necessary since, if not properly used and disposed of they can cause more problems than they prevent. If a decision is made that they are needed training in proper application, removal, disposal and destruction would be necessary. In most situations it is better to rely on simpler methods of prevention These include the following :

Physical separation: It is reckoned that being a distance of 1 metre away from a person is sufficient to reduce the risk of transmission of disease significantly. Staff need to be aware of this. In addition there may be situations where either glass or plastic panels will add to the protection eg in interview situations or at reception desks. Or the re-siting of desks so that people are not confronting each other directly could be appropriate.

Personal hygiene: The value of hand washing is under recognised. Although known as a means of reducing the spread of enteric (bowel) diseases, it is less appreciated that respiratory viruses such as influenza and even the common cold can be spread by hand.

This may be directly (coughing into the hand or touching the nose) or indirectly through droplet spread onto surfaces – the virus can live for a few hours on a doorknob or desk surface and be picked up from there by hands and conveyed to the nose or mouth. Hand washing will prevent this.

Other: There has been a lot of talk about the value of vaccines and antivirals such as Tamiflu. Vaccines are currently not available and although potentially useful it is probable that they would take several months to become available. This is useful if the spread of the disease can be slowed to allow time for development of a vaccine. How effective Tamiflu will be is currently uncertain but it is the best we have. Its value is in treatment of patients who have the disease or the limiting of development of the disease in exposed persons. Although it could theoretically be used for prevention this would be an extremely wasteful use of a scarce resource.

Sick and temporary leave policies: If staff feel under pressure to come to work when they are ill because they have no sick leave entitlement remaining, this again will merely spread the disease to the rest of the staff. And if there is a policy to exclude those who are sick, then some legitimate means of dealing with this is required, and special sick leave would seem to be the best way of doing this.

Care of family members and for bereavement: It is likely that staff will need to take time off to cope with family who are sick at home or unable to be cared for because of closed schools and child care. Unless a policy is in place to cover this, then it could prove an incentive to mass non-approved leave.

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#### Containment Activities

Develop infection control protocols. Employers need to introduce protocols for basic issues such as cleaning (bleach solutions for cleaning contaminated surface are effective), hand washing, coughing etc.

Ways to separate staff from public as far as possible should be identified.

Where possible, companies may be able to reduce risk of infected persons entering the site and practice internal surveillance to assess disease occurrence and absenteeism will provide useful information to aid work planning.

#### Prepare for Recovery

It is also important to have in place a plan to deal with the recovery phase and the return to normal business bearing in mind that the whole of society will have been involved. This may require the designation of a Recovery Director.

Provision will need to be to fill vacancies, to recover or reconstruct records and possibly support recovery of clients and resources.

#### Conclusion

A pandemic will occur, whether or not it is the avian flu variety could be debated. It cannot be prevented but it can be mitigated. Proper planning will slow the progress of a pandemic which will lower the impact of a high peak in incidence, and enable business, services and society to cope without being overwhelmed and possibly permit the development of vaccines which would then further diminish the health, social and economic consequences.

For further information, although there are many sites around, the most relevant in the New Zealand situation see the Ministry of Health website ([www.moh.govt.nz/pandemicinfluenza](http://www.moh.govt.nz/pandemicinfluenza)).