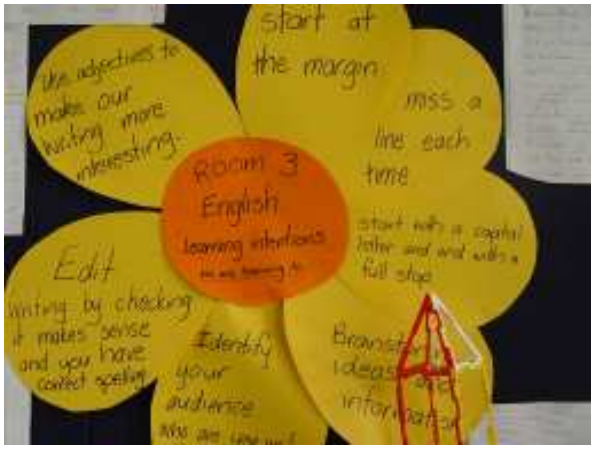
NELSON CENTRAL SCHOOL
INFLUENZA PANDEMIC PLAN

Updated 16 June 2009



Disclaimer

Nelson Central School adapted this guide from documents prepared by Ministry of Education (MoE), the Ministry of Economic Development (MED), the Ministry of Health and the Ministry of Transport. It is intended to promote good practice in our school in planning for a possible influenza pandemic. The information is current as at the date of publication, but may change over time. For latest information and advice check the Ministry of Health website www.moh.govt.nz/pandemicplanning.

This document is not intended to cover every situation. Details relevant to our particular circumstances may have been omitted. The main reference point for medical issues is the Ministry of Health's website www.moh.govt.nz/pandemicinfluenza

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Influenza Pandemic Planning:
Planning Guide for Nelson Central School

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1. Introduction

The World Health Organisation (WHO) has warned that there is a high risk of the avian influenza ("bird flu") becoming the next human influenza pandemic. The Ministry of Health (MoH) is currently updating its pandemic influenza plan and is leading government-wide work to prepare for a possible pandemic in New Zealand. More information about the characteristics of pandemic influenza is contained in Appendix 1.

Table 1 outlines the five stages of MoH's pandemic influenza management strategy as well as the "alert codes" that will signal a shift from one stage to the next. In October 2005, New Zealand is in Alert Code White. Decisions to move from Code White to Yellow, and Yellow to Red (i.e. the escalation steps) will be made by MoH.

Table 1 New Zealand Ministry of Health Strategy for Pandemic Management adopted by the Nelson Central School Board of Trustees

STAGE	NEW ZEALAND STRATEGY	MoH / DHB[1] ALERT CODE
1	**Plan for it** (Current stage)	WHITE (Information / advisory)
		YELLOW (Standby)
2	**Keep it out** (Border Management)	RED (Activation)
3	**Stamp it out** (Cluster Control)	
4	**Manage it** (Pandemic Management)	
5	**Recover from it** (Recovery)	GREEN (Stand down)

This Planning Guide sets out a range of information to help us plan for a possible pandemic, to protect staff and students.This Planning Guide:

- briefly describes the Board of Trustees' actions to manage any future pandemic
- contains some strategies for the school including ideas about how to:
  - maintain essential activities e.g. curriculum programmes
  - prevent or minimise the spread of infection in our school

[1] DHB = District Health Board.

- Appendix 1: sets out background information on pandemic influenza
- Appendix 2: describes some possible scenarios for a pandemic in New Zealand.

The information on business continuity planning for a pandemic is necessarily generic, and will need to be adapted to meet the circumstances of your organisation.

Primary sources of information include MoH[2], WHO[3], Vancouver Coastal Health's Regional Pandemic Influenza Response Plan[4], Singapore's Influenza Pandemic Plan[5], and the Australian Management Plan for Pandemic Influenza[6].

This Planning Guide also contains material drawn from a pandemic management plan recently prepared by The Shell Company of Australia Limited ("Shell") for use in their installations in Oceania. Through MED, the Ministry of Education acknowledges the support that Shell has provided. Shell's material is provided on the basis that it is drawn from a specific internal planning document created to address circumstances that arise within its specific business. Shell shall not be liable for loss suffered by any person resulting in any way from the use of, or reliance on, this material.

The most recent version of MoH's *National Health Emergency Plan: Infectious Diseases*[7] and appendices are available on the MoH website. The Plan is currently under revision. It contains specific planning information on influenza pandemic management for New Zealand. New Zealand's response may be different from other countries owing to our unique geographical position. We are aware that our proposed actions will vary from those of the WHO from time to time, particularly with respect to border management issues.

This Planning Guide draws on the best information available at this time. Health advice will change over time as new information becomes available. Please check the MoH website for updated information. Note that MoH offers free subscriptions to email notifications of any updates to their influenza pandemic web pages (available via their website).

Through MED, the Nelson Central School Board of Trustees acknowledges the extensive support and assistance provided by the Ministry of Education, the Ministry of Health, Ministry of Civil Defence and Emergency Management, and the Department of Labour in preparing this Planning Guide.

March 2006

2 http://www.moh.govt.nz/pandemicinfluenza
3 http://www.who.int/csr/disease/avian_influenza/en/index.html
4 http://www.vch.ca/public/communicable/pandemic.htm
5 http://www.moh.gov.sg/corp/hottopics/influenza/detail.do
6 http://www.health.gov.au/internet/wcms/publishing.nsf/Content/phd-pandemic-plan.htm
7 http://www.moh.govt.nz/nhep

2. Context

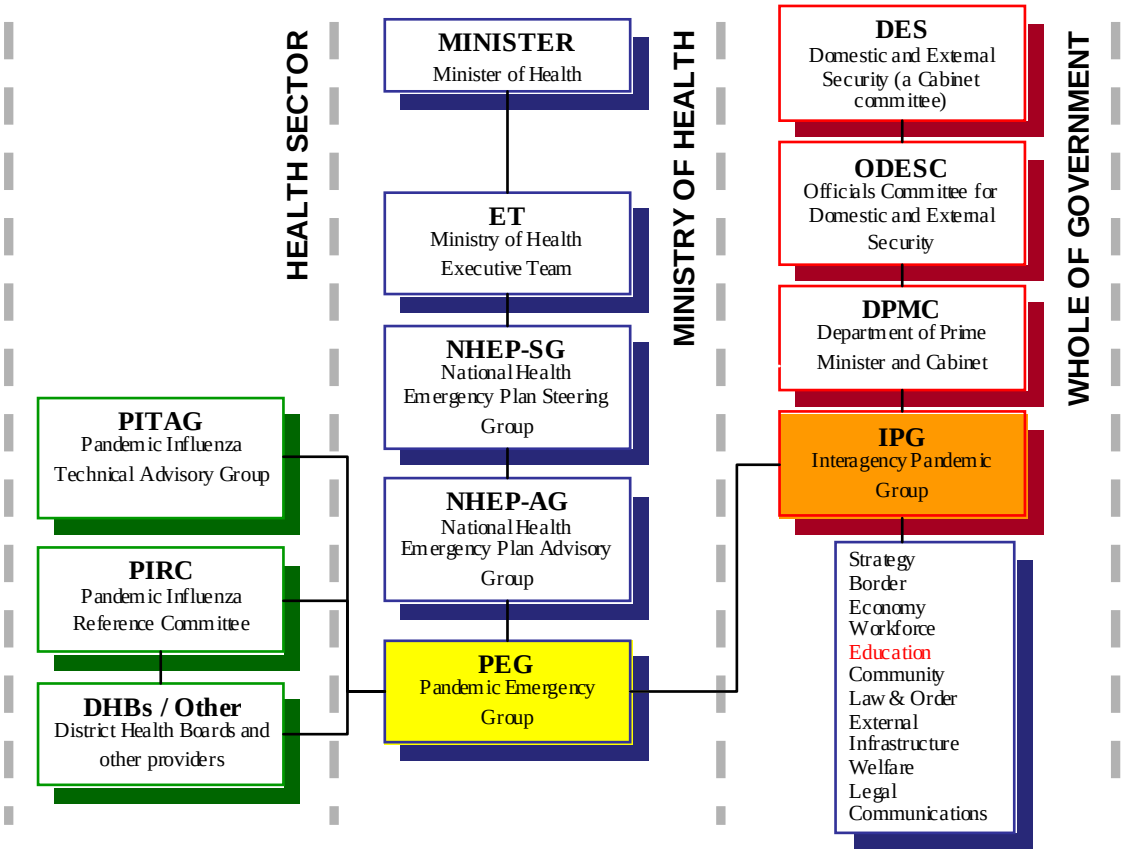
2.1 How is the New Zealand Government Preparing for an Influenza Pandemic?

New Zealand has been planning for an influenza pandemic for some time. MoH is working with the health sector and other government agencies, including the Ministry of Education, to ensure New Zealand is as prepared as possible for a potential pandemic.

As shown in the following diagram, MoH has set up a government-wide Intersectoral Pandemic Group (IPG). A number of workstreams have been formed under the IPG to plan for and minimise the impact of risks associated with a pandemic.

The Ministry of Education is leading the education workstream. It aims to ensure that education agencies and providers:

- contribute to preventing or minimising the effects of pandemic influenza through general health education
- are prepared for possible disruption to services owing to staff shortages or enforced closures.



MoH's *National Health Emergency Plan (NHEP): Infectious Diseases* describes how MoH and health services will function following declaration of a national health-related emergency.[8] District Health Boards, along with Police, Fire and "lifeline utilities" are part of regionally-focused Civil Defence Emergency Management (CDEM) Groups. CDEM Group plans may be accessed through regional and city council websites.

The pandemic influenza section of NHEP is currently being updated, and will be available on the MoH website (www.moh.govt.nz/nhep). This section will be based around "alert codes" which define the planning escalation steps for action in the event of a pandemic. Changes in alert codes will be widely publicised. The alert codes provide the Nelson Central School Board of Trustees with triggers to activate its own pandemic plans.

MoH advises that the potential impacts of an influenza pandemic in New Zealand include:

- morbidity and mortality are unknown, but may be very high
- full community mobilisation needed – all government and many community agencies are likely to be involved in the response
- health services may be unable to provide direct care (the orientation of health care may be to co-ordinate and support community mobilisation)
- periods of very high staff and student absence rates may be likely
- ECE services, schools and tertiary organisations may be closed for a period of weeks or months, impacting on the workforce and economy.

2.1.1 What are the Strategic Aims of New Zealand's Pandemic Plan?

Once the epidemiology of the pandemic strain virus is known, MoH will customise its strategy to address the particular virus. As at October 2005, the MoH's five-stage strategy to which by the Nelson Central School Board of Trustees adheres is described as:

[8] New Zealand's response may be different from other countries due to our unique geographical position, particularly with respect to border management issues.

Table 2 Overall Influenza Pandemic Management Strategy and Associated Actions

STAGE	NZ STRATEGY	MoH / DHB ALERT CODE	OBJECTIVE AND ACTION
1	**Plan for it** (Planning)	**WHITE** (Information / advisory)	Objective: devise a plan to reduce the health, social and economic impact of a pandemic on New Zealand Full engagement of whole of government Consultation with and input from many agencies
		YELLOW (Standby)	Prepare to implement pandemic response action plans
2	**Keep it out** (Border Management)	**RED**[9] (Activation)	Objective: keep pandemic out of New Zealand Wide range of border management options, up to: » Closure of New Zealand's border to all non-nationals » Quarantine of all returning New Zealand citizens Enhance internal disease surveillance and notification Investigate and follow up any suspect cases
3	**Stamp it out** (Cluster Control)		Objective: control and/or eliminate any clusters that might be found in New Zealand Isolate and treat patients and households Contact trace and treat all contacts Restrict movement into/out of affected area(s) MoH directs regional closure of education organisations and other places where people congregate, and prohibits mass gatherings Maintain border management
4	**Manage it** (Pandemic Management)		Objective: to reduce the impact of pandemic influenza on New Zealand's population Health service reconfiguration to support community response in affected areas MoH directs national closure of education organisations and other places where people congregate, and prohibits mass gatherings Social distancing measures Support for people cared for at home, and their families
5	**Recover from it** (Recovery)	**GREEN** (Stand down)	Objective: expedite the recovery of population health where impacted by pandemic, pandemic management measures, or disruption to normal services Phase starts when the population is protected by vaccination, or the pandemic abates in New Zealand

The Nelson Central School Board of Trustees will observe the stages described and will respond at each stage to directions from the Medical Officer of Health. The decisions to move from Code White to Yellow, from Yellow to Red and from Red to Green, will be made by MoH. MoH will notify the public through its website and media channels.

[9] The transition from Code White to Red could be quite quick (i.e. the Code Yellow phase could be short).

2.1.2 What are the Medical Officer of Health's Powers in a Pandemic Emergency?

Activation of the National Health Emergency Plan begins when MoH learns of a potential national health-related emergency, such as an influenza pandemic. Medical Officers of Health have wide ranging powers designed to prevent the outbreak or spread of any infectious disease. These powers include the ability to:

- require people to submit themselves for medical examination
- require people, places, buildings, ships, animals, and things to be isolated, quarantined, or disinfected
- forbid persons, ships, animals, or things to be brought to any (air or sea) port or place in the health district from any port or place supposed to be infected
- forbid persons to leave a place or area until they have been medically examined and found to be free from infectious disease
- require theatres, churches, bars, clubs and other public gathering places to be closed
- prohibit the attendance of children under the age of 16 years in schools (tertiary organisations need to take note), Sunday schools, and other public places within the district
- have infected animals destroyed.

Why Prevent Public Gatherings and Close Schools?

During the 1957-1958 pandemic a WHO panel found that spread of the influenza within some countries followed public gatherings, such as conferences and festivals. This panel also observed that in many countries, the pandemic broke out first in camps, army units and schools.

During the first wave of the Asian influenza pandemic of 1957-1958, the highest attack rates were in school-aged children. A recently published study[10] found that during an influenza outbreak, school closures were associated with significant decreases in the incidence of viral respiratory diseases and health care utilisation among children aged 6-12 years.

2.1.3 What powers do Schools and Tertiary Organisations in have in a Pandemic Emergency?

Schools

The Education Act 1989: gives principals and boards of trustees powers to exclude particular students and staff or to close their school in certain circumstances:

- Section 19 provides that a principal may exclude a student who may have a communicable disease (communicable diseases are specified in the Schedule to the Act. Highly Pathogenic Avian Influenza or 'bird flu' (HPAI subtype H5N1) was added on 12 February 2004. **In practice, schools would generally proceed subject to advice received from health authorities.**

[10] Heyman, A., Chodick, G., Reichman, B., Kokia, E., Laufer, J (2004). Influence of school closure on the incidence of viral respiratory diseases among children and on health care utilization. The Paediatric Disease Journal. 23 (7), July 2004.

- Section 65E provides that a board may close a school in an emergency such as an epidemic.

The Health (Infectious and Notifiable Diseases) Regulations place duties on schools, teachers and parents in the case of a pandemic:

- Regulation 14 provides that schools must exclude teachers and students who have an infectious disease.

What is the Ministry of Education's Role in Pandemic Planning for Education Agencies and Providers?

The Ministry of Education is leading pandemic planning for the education sector. The Ministry is working with a number of other agencies, including the Education Review Office, the NZ Teachers Council, the New Zealand Qualifications Authority, the Tertiary Education Commission, Careers Service, and the Ministry of Health (on overall pandemic planning).

The Ministry of Education has engaged with education agencies and providers through:

a. direct dialogue with the government education agencies listed above, and using their networks to inform education organisations about pandemic contingency planning

b. meeting with education sector representative groups such as:

   - Early Childhood Advisory Committee (ECAC)
   - Schools Consultative Committee (SCC)
   - Tertiary Consultative Group (TCG)

   to assist with planning at the education provider level

c. information and resources will be made available to a wide range of other education providers to assist with their contingency planning. The Nelson Central School Board of Trustees

The Nelson Central School Board of Trustees is prepared to accept the benefits of information and advice generated by these groups and will make use of such information and resources to informs its decisions.

2.2 Why Focus on Education Agencies and Providers?

Size of the sector

More than 25 percent of New Zealand's population is directly involved in the combined education sectors. Because a key response to pandemic influenza will be to minimise social gatherings, education providers need to be prepared for enforced and sustained regional or national closures by health authorities. Pandemic modelling strongly suggests that education environments – especially those dealing with young people – provide a very fertile ground for spreading viruses.

At this planning stage, education providers can play a key role in contributing to cultural change around good personal hygiene practices (cough and sneeze etiquette, hand washing and drying etc).

Need for cohesive response

Employers, managers and governors will need to work with their local Medical Officers of Health with regard to enforced closures of education organisations. Responsible and ethical action will be required by these groups to ensure they do not use their powers of closure in ways that would be unhelpful to a cohesive national response. For example, cluster control of a pandemic in Auckland should not trigger closures of early childhood services, schools or tertiary organisations elsewhere in the country.

Government education agencies

Government education agencies need to assess their own critical functions and plan for the maintenance of essential services during an emergency. Agencies need to plan for circumstances where their non-critical functions may be dispersed or temporarily halted.

Role of education sector in recovery

Education agencies and providers will be central to social recovery after the passage of a pandemic and planning should anticipate psychosocial pressures at this stage.

2.2.1 Pandemic Characteristics and Impact

A pandemic will not be like a physical disaster. A pandemic has unique characteristics when compared with a more "typical" disaster. For example:

- ***Widespread impact***

  The impact of a pandemic would likely be widespread, even nation-wide, not localised to a single area and there may be little outside assistance. Many business continuity plans (BCPs) assume some part of an organisation is unaffected and can take up the required capacity.

- ***Not a physical disaster***

  A pandemic is not a physical disaster. It has some unique characteristics that require implementation of activities to limit contact such as restriction of movement, quarantine, and banning of public gatherings.

- ***Duration***

  A pandemic would not be a short, sharp event leading immediately to commencement of a recovery phase. Many BCPs assume the event is short/sharp and that recovery can start immediately. A pandemic emergency may last several months.

- ***Notice***

It is likely that there will be some advance warning from the development of the pandemic overseas, but it is possible that any warning period may be very short. Should pandemic influenza spread within New Zealand it will probably be some weeks before the full impact on workforce will be felt, although there may be early impacts resulting from school closures and similar measures.

- ***Primary effect is on staffing levels***

  Unlike natural disasters, where disruption to infrastructure and service delivery is likely to be hardware-related, a pandemic is more of a threat to staff. MoH advises that businesses should plan for up to 50 percent staff absences for periods of about two weeks at the height of a severe pandemic, and lower levels of staff absence for a few weeks either side of the peak. For education providers, however, enforced closure may take away the need to plan for this kind of scenario. Overall a pandemic wave may last about 8 weeks. Note that the pandemic may come in waves of varying severity over time.[11]

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 the ill
- people may feel safer at home (e.g. to keep out of crowded places such as public transport)
- some people may be fulfilling other voluntary roles in the community
- others may need to stay at home to look after pre-school and school-aged children (as early childhood centres and schools may be closed).

A pandemic may have other impacts on education providers, for example:

- supplies of materials needed for ongoing activity may be disrupted, e.g. if they are normally imported across borders that have been closed
- similarly, availability of services from sub-contractors may be impacted (this may affect maintenance of key equipment, and is an area that merits close planning attention)
- demand for infrastructure services may be impacted – demand for some services may increase (internet access is a possible example); while demand for others may fall (e.g. certain types of travel activity may reduce)
- education delivery may continue after enforced closures, through the use of technology, e.g. television, radio, internet. Education organisations may need to give this close planning attention.

Business continuity plans may need to be reviewed to ensure that they withstand significant staff absences and other pandemic-related risks. Again, enforced closures or restricted work practices may mitigate these risks, and this is the most likely scenario for education providers.

[11] A pandemic could last many months and may contain peaks followed by periods of reduced illness. The 50% is an estimate of staff absences at peaks of a significant pandemic.

2.2.2 Human Resource Obligations

Compliance with the Health and Safety in Employment Act 1992

In addition to the requirements under the Civil Defence Emergency Management Act, pandemic planning will help education agencies and providers to ensure they meet their obligations under the Health and Safety in Employment Act:

- *Section 6: All practicable steps*

  "Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to:

  - provide and maintain for employees a safe working environment
  - provide and maintain for employees while they are at work facilities for their safety and health..."

- *Section 28: Employees may refuse to perform work likely to cause serious harm*

  "An employee may refuse to do work if the employee believes that the work that the employee is required to perform is likely to cause serious harm to him or her...."

Independent contractors and volunteer workers have the right to withdraw their labour or services at any time, including when they feel the work environment presents an unsatisfactory level of risk.

Employers must take all practicable steps to mitigate the risk and protect employees, especially those at high risk. In a pandemic it is anticipated that workers at high risk will include health care personnel, health support staff and first responders (fire/police/ambulance/other emergency workers). Again, enforced closures of businesses and education providers will mitigate these risks for teaching staff. Employers should be aware that at both Code Yellow and Code Green phases, staff and students may be reluctant to return to the workplace. Conversely, some may actively seek to return before it is appropriate.

Compliance with Other Human Resource Legislation

The following employment relations legislation will continue to apply:

- Employment Relations Act 2000;
- Holidays Act 2003 (sick, bereavement and annual leave, and public holidays); and
- Wages Protection Act 1983.

These are in addition to the requirements of the Health Act 1956 and the Health and Safety in Employment Act 1992.

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

The Department of Labour's website (www.dol.govt.nz) provides further information regarding human resource issues in a pandemic.

3. Pandemic Contingency Planning for Nelson Central School

The following information is necessarily generic, and will need to be adapted to meet the circumstances and needs of Nelson Central School.

3.1 Short, Medium and Long-Term Planning

It is not possible to predict how long a pandemic may last. There could be more than one wave of infection during a pandemic period. Each wave could typically last about 8 weeks, building to a peak in week 4 before abating again. MoH advises that organisations should plan for up to 50 percent staff absences for periods of about two weeks at the height of a pandemic wave, and lower levels of staff absence for a few weeks either side of the peak.[12]. The planning scenarios developed by MoH (Appendix 2) will be used as professional development for staff as we prepare ourselves for a pandemic. **N.B. Enforced closures of the school will affect thinking here.**

To ensure business continuity in a pandemic, short term planning, with a health focus, is paramount. Succession planning (in the event of staff deaths or long-term disability during the pandemic) and back up planning is also essential. Emergency management and overall national recovery is greatly facilitated if essential services are available without significant interruption. **N.B. Enforced closures of the school will affect thinking here, however, these comments will be relevant in the recovery phase.**

The Nelson Central School Board of Trustees continuity planning for a pandemic will include:

- identification of essential activities (and the core people and skills to keep them running), and ensuring that these are backed-up with alternative arrangements
- mitigation of business / economic disruptions, including possible shortages of supplies
- minimising illness in workers and clients.

Each of these items is addressed in a separate section in the following pages.

3.1.1 Influenza Manager

The Nelson Central School Board of Trustees pandemic manager will be the principal, **Paul Potaka.** The deputy manager will be the school's health and safety officer, **Neroli Sullivan.** A second deputy manager will be a member of the school's pandemic planning team **Brenda Black.** Some tasks the "influenza manager(s)" may perform include:

- setting up a system to monitor staff who are ill or suspected to be ill, including contacting staff who are unexpectedly absent from work – has their GP been notified of their illness? Have "contact" issues been addressed? Is someone able to care for them?
  - A list of staff will be maintained and internal communications lists will be used to the status of all staff can be ascertained
    - Syndicate leaders contact syndicate members
    - Christine Harrison to contact support staff

[12] A pandemic could last many months and may contain peaks followed by periods of reduced illness. The 50% is an estimate of staff absences at peaks of a significant pandemic.

        - Paul Potaka to contact office/administration staff, ICT staff, caretaking staff and syndicate leaders.
        - Helen Talbot to contact RTLBs and RTLit
        - Dental nurses to contact each other.
- setting up a process to facilitate / encourage the return of staff to work once they are better or at the end of a quarantine period
    - Staff will be expected to remain absent for 7 days from the day they become affected
- ensure the workplace has adequate supplies of tissues, medical and hand hygiene products, cleaning supplies and masks. It may be difficult to purchase such products once a pandemic begins therefore limited supplies will be purchased as soon as possible. For guidance on personal protective equipment (PPE) see page 38 of this plan or visit the MoH website.
    - See the section ***Where can we find more information***? p. 40

3.1.2 Medical Advisor

The Nelson Central School Board of Trustees pandemic planning committee will consult a medical practitioner for assistance and advice in the event of a pandemic. The Department of Labour has a medical practitioner assigned to each of their regional offices (www.osh.dol.govt.nz/about/region-office/index.shtml).

The Nelson Central School Board of Trustees pandemic planning committee will also liaise with the Public Health Nurse for information. **Contact person is Gill Vaughan tel: 546 1535 or 027-4317 112.**

3.1.3 Activation of Pandemic Continuity Plan

MoH will widely publicise any changes to the "alert codes", and may signal the need to activate business continuity plans. The Ministry of Education and other education agencies will have a communication contact "tree" to assist with keeping providers informed of these changes.

Table 3 below provides summary guidance as to how a provider might proceed as different stages of a pandemic are reached.

Table 3 Suggested Summary Actions for Nelson Central School for each Alert Code

STAGE	NZ STRATEGY	MoH / DHB ALERT CODE	SUGGESTED EDUCATION AGENCY AND PROVIDER ACTIONS
1	**Plan for it** (Planning)	**WHITE** (Information / advisory)	Review business continuity/emergency plans: Identify essential services Identify critical functions that must be sustained Assess core staff and skills, and ensure essential positions are backed-up by an alternative staff member Identify ways to increase "social distancing" in the education workplace, reduce movement etc. Consider organisational policies to encourage the sick to stay at home, and enable staff to work from home Identify ways to minimise illness amongst staff and students, and consider how essential messages (e.g. basic hygiene) can be promoted Identify needs for personal protection (e.g. masks) and cleaning equipment, and check air conditioning. Purchase additional supplies.
		YELLOW (Standby)	Discuss particular pandemic planning needs with regional Civil Defence Emergency Management (CDEM) groups Schools should consider work programmes for students who may have to stay at home if the situation moves to Code Red
2	**Keep it out** (Border Management)	**RED**[13] (Activation)	Alert staff and parents to change in pandemic status Activate staff and student overseas travel restrictions Review/test essential business continuity measures
3	**Stamp it out** (Cluster Control)		Alert staff and parents to change in pandemic status Activate essential business continuity measures Activate student work programme measures (either regionally – "Stamp It Out" – or nationally – "Manage It".)
4	**Manage it** (Pandemic Management)		Activate measures to minimise introduction and/or spread of influenza in work place (post notices, social distancing, managing ill students and staff members, workplace cleaning, etc.) Communicate with staff, parents and students to promote confidence in your organisation Activate contact tracing where students or staff become ill in education or at work during Cluster Control phase Activate process for recovered / well students and staff members to return to education or work
5	**Recover from it** (Recovery)	**GREEN** (Stand down)	Manage return to business as normal

[13] The transition from Code White to Red could be quite quick (i.e. the Code Yellow phase could be short).

3.1.4 Communication with Students, Parents and Staff

It is likely there will be anxiety during a pandemic and this is likely to contribute to increased absence and/or increased stress to staff, parents and students. Suggested ways to manage this include:

- communicate early the possibility of a pandemic – and your organisation's preparedness to manage it – to staff, parents and students. MoH's influenza fact sheet might be useful (www.moh.govt.nz/pandemicinfluenza)
- discuss with staff possible health and safety issues, potential for stand down, and leave arrangements if they are ill or need to look after family members
- have a comprehensive plan in place which is clearly communicated to staff, students and parents. Ensure that communications management during the pandemic is part of the plan. It will be important to have systems in place to allow your organisation to communicate in a pandemic
- provide clear, timely and pro-active communications to staff, students and parents explaining how the school is handling the situation
- the school will establish a "communications tree" to circulate important messages.

3.2 How will Essential Activities be Maintained?

In the event of a pandemic, it is important that people with core skills are available to keep essential parts of our business operating. The following points are designed to help us plan for this. **Note - Enforced closures of the school will affect thinking here.**

3.2.1 Identification of Core People and Core Skills

- What are the "essential" parts of the business?
  - Teaching and learning
  - Caretaking and cleaning
  - Office administration
- Who are the key people required to keep the essential parts of the business running?
  - Teachers and support staff
  - Administration staff
  - Caretaker and cleaners
- What are the core skills required to keep business running?
  - Teaching
  - Public relations
  - Caretaking and cleaning
- 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) that could be drawn on if necessary? Is it possible to co-ordinate / operate your business remotely, using telephone and email?
  - It is possible for classes to 'double up' in an emergency
  - Need to identify back caretaking services
  - It is possible to operate some teaching functions remotely although staff will need some training to do that
  - Special Needs Children will need to be catered for if they attend school if their teacher aide is absent from school
- Who are the key people required to manage the pandemic contingency plan?
  - Paul Potaka - Neroli Sullivan - Trina Bennett - Brenda Black
- Do you have any systems which rely on periodic physical intervention by key individuals to keep them going? How long would the system last without attention?
  - The caretaker is required to maintain heating services in winter.
  - ICT facilities required to be maintained by the ICT officers

Once the core people and skills are identified, ensure that they are aware of their position and how they will be managed in the event of a pandemic. Consider strategies for minimising the possibility that they become ill with influenza, e.g. working from home even in very early stages of a pandemic, or other social distancing measures.

To make working from home a practice in our school, we will encourage staff to "give it a go", say once a fortnight, to aid familiarity and to "iron out" any computer connection / technological issues.

Non-essential staff may be asked to "stand down" (with appropriate pay arrangements[14]) in the Code Red phase to help minimise the number of staff who may be exposed to the influenza virus. Teacher aides who work with special needs children or who work with special needs programmes will need to be monitored since their absence may affect the school's ability to teach them.

In the event of a pandemic, employees have the option of leaving their jobs. They also have the right to refuse to perform work if they believe it is likely to lead to their suffering serious harm. However, their belief must be on reasonable grounds, and they must have attempted to resolve the matter with their employer before they can refuse. **See appendix 3 to see how this might be worked out in practice.** The right to refuse unsafe work does not apply unless the risks of the work have materially increased. To avoid such situations, it is best to have had discussions with staff prior to any pandemic occurring. **N.B. Enforced closures of the school will affect thinking here.**

[14] Waiting for output from Economy work group on financial implications re staff salaries, ECE service payments etc

3.2.2 Planning for Absence

- What are critical staff numbers and skills required to keep essential parts of the organisation running – at what level does business, such as payroll and classroom teaching, stop? What arrangements need to be made to minimise risk to staff?
  - Until a decision is made to close the school the school will operate as near normal as possible by sharing classes and teaching duties amongst teachers present.
- Who should make the decision to shut activity down when absence rates threaten safe business continuity?
  - The Ministries of Education and Health will decide at what point the school has to be closed
- Could some, or all, of your operations continue with if most staff working from home? For example, is it feasible that staff could prepare individual programmes for each of their students for, say, eight weeks?
  - It is possible for teachers to provide some curriculum support via e-mail and the internet. Some professional development will be required for some people in order for that to be a reality.

3.2.3 Knowledge Management

Key operating and emergency management information will need to be stored in known, accessible and shared locations.

- Teachers will have access to updated student information available on the school data base - Pupil Files
- Teachers will have, inside their yellow attendance register folders, essential health and safety information about children in their classes who are diabetic or who have severe allergies
- Teachers will have access to staff lists in order to maintain contact with colleagues

3.2.4 Communications

How they might communications be maintained with:

- key people (e.g. staff, students, parents)
- other business units in your organisation
- central government
- key suppliers
- key contractors.
  - Group e-mail lists will be maintained for parents, staff and other people and organisations essential to our business

3.3 How Might Shortages of Supplies Affect Operations?

Shortages of supplies may occur because of increased demand during the pandemic (i.e. cleaning supplies, home based services). Pandemic planning should consider the need for ensuring adequate availability of essential supplies.

Shortages may also occur because of disruptions in transport systems or inability of suppliers to meet demands because of their own staff shortages. Some New Zealand supplies travel considerable distances by truck, train, ship or aircraft, and are vulnerable to any disruption. Absences of workers/drivers and other transportation staff may affect both the production and delivery of vital 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 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.

Response

- We can continue to operate in a limited capacity for 2-3 days if supplies are interrupted
- Gloves, masks and hand towels to be stockpiled
- Share our plan with
  - postal and courier services
  - laundry delivery staff
  - Xerox photocopying services
  - Cleaning company
  - A notice will be attached to the front door advising visitors what we expect of them **See Influenza Notification notice p23**
  - If the school is directed to close
    - mail and courier services will be advised to hold mail
    - the cleaning company will be advised to suspend services
  -

- How Can We Protect Staff, Students and Visitors From Getting Sick?

The main strategies for minimising illness among staff, students and visitors include:

- Restrict workplace entry of people with influenza symptoms – advise through the school newsletter, website or group e-mail **See Influenza Notification notice p23**
- Practice good personal hygiene and workplace cleaning habits. **See p24 Personal Hygiene and p24 Hand Hygiene; p25 Basic Hygiene notice; p26 Hand Hygiene Notices, p28 Workplace cleaning**
- Increase social distancing (e.g. enable tele-working, avoid face-to-face contact). **See p 30 Social Distancing**
- Manage staff and students who become ill at work.
- Manage staff and students who travel overseas (international students need special consideration here).

This section identifies some issues you may want to consider in your plan and offers guidance on how to address them. Examples of notices, fact sheets, etc. are provided for your convenience – these are marked in the text with the symbol (‡).

Adopting the advice included in this section, with particular attention to protection measures summarised in Table 4, should assist the school with compliance with the Health and Safety in Employment Act 1992.

Table 4 Summary of Influenza Protection Measures

Protection measure	Where applicable
Hand hygiene, cough etiquette, ventilation	Everyone, all the time
Organisational policies	Every organisation, all the time
Social distancing	Everyone, whenever practical
Protective barriers	In situations where regular work practice requires unavoidable, relatively close contact with the public (includes teachers' contact with students)
Disposable surgical mask	Workers in any community or health care setting who are caring for the sick (this includes first responders) Also as a possible adjunct to protective barriers
Disposable particulate respirator masks, eye protection, gloves, gowns / aprons	Health care workers participating directly in close contact patient care when there is a high risk of contact with respiratory secretions, particularly via aerosols (mostly inpatient settings).

Note - Enforced closures of the school will affect thinking here.

3.3.1 Restrict Workplace Entry of People with Influenza Symptoms

On declaration of Code Red, the school will consider putting up notices (‡) at all workplace / facility entry points, advising staff and visitors not to enter if they have influenza symptoms.

Staff and students will be advised not to come in when they are feeling unwell, particularly if they are exhibiting any influenza symptoms. It may be helpful to inform staff and parents of the differences in symptoms between influenza and a common cold (‡). Unwell staff and students will be advised to see a doctor, and to stay at home until symptoms resolve.

Use normal communication methods to ensure all staff, parents and students receive the notice. They may also be provided with information about how to stay well during a pandemic, e.g. the MoH fact sheet (http://www.moh.govt.nz/pandemicinfluenza).

A process will be maintained for ensuring that ill students and staff have completed any required quarantine period and *are healthy* before allowing them to return to education or work.

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

INFLUENZA NOTIFICATION

Influenza is a contagious disease. There is currently an increase in the numbers of people in New Zealand with influenza. In order to reduce the spread of influenza in this workplace, the following is required of everybody:

DO NOT COME TO WORK if you have:

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

If some of the above apply to you, please go home and wait until you have recovered before returning to work.

If you have recently arrived or returned from overseas,
please ask to speak to the influenza manager (see below)

If you start to feel ill at work, **DO NOT** leave your work area

Call your influenza manager …… Ext……

3.3.2 Personal Hygiene

Personal hygiene measures should be reinforced as a key way to minimise influenza transmission:

- Cover nose and mouth when sneezing and coughing (preferably with a disposable single use tissue).
- Immediately dispose of used tissues.
- Adopt good handwashing practices, particularly after coughing, sneezing or using tissues.
- Keep hands away from the mucous membranes of the eyes, mouth, and nose.

Ensure that adequate supplies of hand hygiene products are available. This is a high planning priority as there may be shortages of soap and hand towels.

Communicate hand and personal hygiene information to staff and visitors:

- Hygiene notices (‡) should be posted in all workplace entrances, washrooms, hand washing stations and public areas.
- Use brochures, newsletters, global emails, notice boards, and information included with payslips, to inform staff and students of the importance of hand hygiene and workplace cleaning during a pandemic.

Examples of notices can be found on the following pages. Another good source of notices and brochures is http://dhfs.wisconsin.gov/communicable/influenza/Employer.htm.

HAND HYGIENE

The most important thing you can do to keep from getting sick is to wash your hands!

Handwashing is the single most important measure to reduce the risks of transmitting infection from one person to another.

Hand washing with soap and water, alcohol-based hand rub, or antiseptic handwash should be performed regularly. Hands should be thoroughly dried, preferably using disposable tissues or towels. Use the disposable towel to open the door.

Hand washing and drying should always be done after coughing, sneezing or handling used tissues or after touching objects, materials or hard surfaces that may have been contaminated by someone else with the infectious illness.

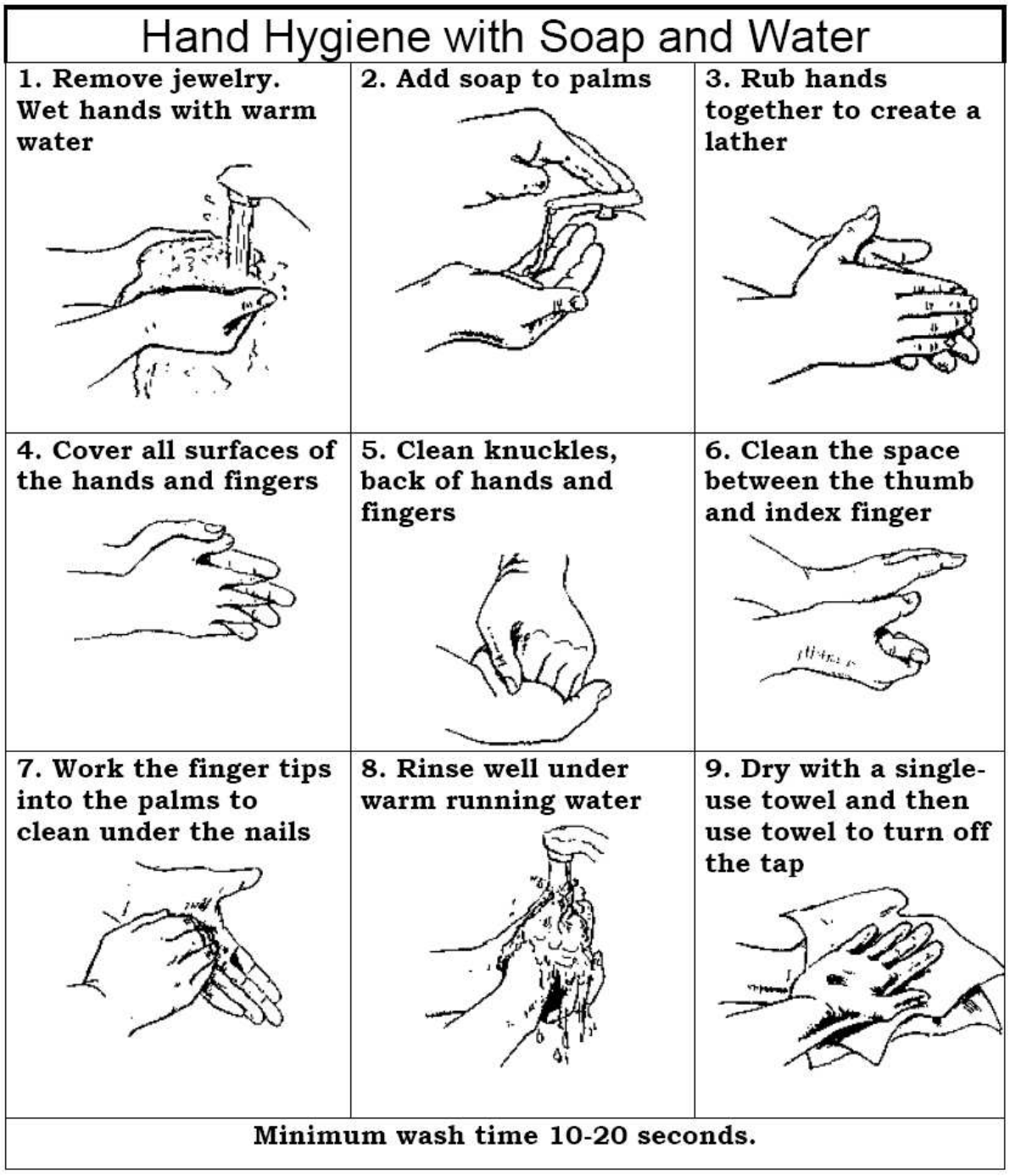
Hand-to-face contact such as can occur during eating, normal grooming, or smoking presents significant risks because of the potential for transmission of influenza from surfaces contaminated with wet respiratory droplets. Handwashing should always be carried out before and after eating, grooming, smoking or any other activity that involves hand-to-face contact.

BASIC HYGIENE NOTICE

PROTECTING YOURSELF AND OTHERS AGAINST RESPIRATORY ILLNESS

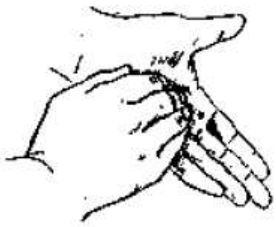
- **HANDWASHING** IS THE MOST IMPORTANT THING YOU CAN DO TO PROTECT YOURSELF
- Cover your nose and mouth when coughing or sneezing
    - Use a tissue and dispose of this once used in the waste
    - Always wash hands after coughing and sneezing or disposing of tissues
- Keep your hands away from your mouth, nose and eyes.
- Avoid contact with individuals at risk (e.g. those with underlying or chronic illnesses such as immune suppression or lung disease) until influenza-like symptoms have resolved.
- Avoid contact with people who have influenza-like symptoms.
- Ask children to use a tissue and cover their nose and mouth when coughing or sneezing and to wash their hands afterwards.

HAND HYGIENE NOTICES



Source: Vancouver Coastal Health's Regional Pandemic Influenza Response Plan

Hand Hygiene with Alcohol-based Hand Sanitizer

1. Remove jewelry. Apply enough product to open palms.** 	**2. Rub hands together palms to palms** 	**3. Rub in between and around fingers** 
4. Cover all surfaces of the hands and fingers 	**5. Rub backs of hands and fingers. Rub each thumb.** 	**6. Rub fingertips of each hand in opposite palm** 
7. Keep rubbing until hands are dry. ****The volume required to be effective varies from product to product. Enough product to keep hands moist for <u>15 seconds</u> should be applied.** Do not use these products with water. Do not use paper towels to dry hands.		
Note: Wash hands with soap and water if hands are visibly dirty or contaminated with blood or other body fluids. Certain manufacturers recommend washing hands with soap and water after 5-10 applications of gel.		

Source: Vancouver Coastal Health's Regional Pandemic Influenza Response Plan

3.3.3 Workplace Cleaning

During a pandemic the school will need to be cleaned more thoroughly to minimise the spread of the virus, particularly hard surfaces (e.g. sinks, handles, railings, objects and counters). Arrangements will be negotiated with the school's cleaning company. Transmission this way is unlikely but influenza viruses may live up to two days on hard surfaces.

Influenza viruses are inactivated by alcohol and by chlorine. Cleaning of 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. Table 5 suggests the appropriate choice and concentration of disinfectants.

Table 5 Workplace Cleaning Products

Disinfectants	Recommended use	Precautions
Sodium hypochlorite 1000 parts per million of available chlorine, usually achieved by a 1 in 5 dilution of hospital grade bleach.	Disinfection of areas contaminated with blood and body fluids.	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. Corrosive to metals.
Granular chlorine 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.
Alcohol 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, particularly when using diathermy, as this can cause diathermy burns.

Staff and students will be reminded not to share cups, dishes, and cutlery and ensure they are thoroughly washed with soap and hot water after use.

Remove all magazines / papers from waiting rooms and common areas (such as tea rooms, kitchens).

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 will identify the basic hygiene practices (including hand hygiene) to be followed by cleaners, protocols for the use of personal protection equipment (if recommended by MoH), and methods for waste disposal.

- Teachers need to have supermarket bags in class to tie off infected material so it is safe for children to remove to the skip

3.3.4 Air Conditioning

(*Source:* www.moh.govt.nz/pandemicinfluenza, 23 August 2005)

There is scientific and medical evidence that influenza can spread in inadequately ventilated rooms. Currently the school does not have air conditioning but in the event that should change in the future, MoH and the Department of Labour advice will be followed: all internal spaces should be well ventilated, preferably by fresh air via opening windows, or by properly designed and maintained air-conditioning systems.

As part of our workplace health and safety monitoring, we will ensure that air conditioning systems are maintained regularly, to the standard of the New Zealand Building Code, Clause G4, Ventilation.

3.3.5 Social Distancing

Another strategy to protect staff and students during a pandemic is to minimise their contact with others. School concerts, prize givings and camps involving large gatherings should be avoided, whether inside or outside.

A distance of at least one metre should be maintained between persons wherever practical. Larger distances are more effective. Visiting unwell people should be avoided unless it is essential.

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.
- 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 at desk or away from others (avoid the staffroom and crowded restaurants). Introduce staggered lunchtimes, morning teas to reduce numbers in the staffroom.
- Do not congregate in photocopy rooms, staffrooms 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 via conference call or outside.
- Set up systems where students and staff can request information via phone / email / fax and have information ready for fast pick-up or delivery.
- Encourage students and staff to avoid recreational or other leisure classes / meetings etc. where they might come into contact with infectious people.

Note - Enforced closures of the school will affect thinking here.

3.4 Managing Staff and Students Who Become Ill

One possible process is outlined below. A screening flowchart (‡) is also presented. Note that this advice is current as at December 2005. In the event of a pandemic, it is recommended that managers and employers check MoH's website for the latest advice (www.moh.govt.nz/pandemicinfluenza).

If a person feels ill, or if someone observes that another person is exhibiting symptoms of influenza, they are to contact the "influenza manager" **by telephone** if possible.

Using a screening flowchart (‡):

1. The Influenza Manager should avoid visiting the person if possible – manage the process over the phone.

2. The Influenza Manager should check if the employee or student has any of the symptoms outlined in the first section of the flowchart.

3. If the employee or student does not have symptoms like those listed they are very unlikely to have influenza and should be reassured but advised to call the influenza manager again later or to see their GP if they are still concerned.

4. If the employee or student does have symptoms that match some of those listed, they should be treated as a "suspect case." It may be helpful to have a staff influenza notification form (‡) completed, including details of any staff, students and/or visitors they have been in contact with. This information will permit the influenza manager to identify recent movements and monitor well-being during the pandemic. **See sample form on p36**

5. The employee or student should be informed where they can find a surgical mask and instructed to wear it immediately. This is to help protect other staff and students. **Each class to have a supply of these in the room**

6. The employee or student should be sent home and immediately contact a health professional in the manner advised by MoH on its website at that time. This may involve phoning the person's normal doctor or nurse, parent/s, or a specially designated centre to seek further advice. The employee's manager or the student's teacher should be informed of the situation. **See p.36 Suspected Influenza Case Notification Form**

7. The employee or student should, if possible, avoid public transport when leaving the education workplace.

8. Contact management (see section 3.5 below for further information) – identify contacts (once an employee or student is suspected to be infected) and maintain a list. Use a notice similar to that used for pediculosis. **See p.36 Suspected Influenza Case Notification Form**

   - advise contacts in person that they have been in contact with a person suspected of having influenza
   - ask contacts to go home, and stay at home until advised otherwise.

9. The employee's or student's work station should be cleaned and disinfected, as indicated in section 3.3.3 (Workplace Cleaning).

- Teachers to maintain suitable kit for this in the classrroom

10. Set up a system to manage the absence and return to work of the employee or student and their contacts. Some issues to consider include:

    – advice to the employee or student to stay away from work / education for 7 days from the onset of influenza (the MoH website will have advice on this once the characteristics of a pandemic are known)

    – decisions on the leave and cover arrangements are being sought from the Ministry of Education

    – check how teachers get credit for leave induced by pandemic

    – checking on the employee / student during his/her absence from work / education. This will facilitate treatment, contact tracing, etc., if they become ill

    – set up a process in your plan for ensuring that:

        (1) the employee or student is healthy before allowing them to return to work / education

        (2) that they are encouraged to return to work or education once they are well.

3.5 Contact Management

3.5.1 Contact Definition

MoH currently defines pandemic influenza contacts as people who have had close physical (less than one metre) or confined airspace contact with an infected person, within four days of that person developing symptoms. These are likely to include family members and/or other living companions, workmates, classmates (if in close contact situations or confined airspace environments), and some recreational companions.

People who have not been in close proximity nor shared a confined airspace with a sick person within four days of that person developing symptoms, are not considered to be a contact.

> Note that the definition of a contact is likely to change once the nature of the pandemic strain is known. Employers and managers should refer to MoH's website during a pandemic for up-to-date guidance.

3.5.2 Contact Management Mandated by Law

Under the Health Act 1956, both highly pathogenic avian influenza (HPAI) and influenza are classed as infectious diseases. HPAI is also a notifiable disease, meaning that some *additional* provisions of the Health Act apply to it, over and above the provisions that apply to influenza. To reduce the risk of further infection, contacts will be expected to stay at home and avoid contact with others for a recommended period. This period will be set by health officials, and is not at the discretion of the employer.

The role of contact tracing may vary according to the phase of the pandemic. At an early phase, when efforts are directed at keeping the pandemic out or managing small clusters, contact tracing and quarantine of cases and contacts will be vigorous. If, however, the pandemic affects larger numbers of people across the country, it will not be effective as a strategy to contain the pandemic, and may be dropped.

In any circumstance, employers and managers should urge sick staff members and students with influenza-like symptoms to return home immediately and contact a health professional in the manner advised by MoH on its website at that time. This may involve phoning the person's GP or nurse, parent/s, or a designated centre, to seek further advice. If a health professional identifies the patient as being a suspect or confirmed case, then the health professional will commence contact tracing in accordance with the protocols set by MoH. This is likely to involve making contact with the patient's school or workplace.

As indicated in the previous section, it is helpful for employers and managers to:

- identify contacts (once an employee is suspected to be infected)
- advise contacts in person that they have been in contact with a person suspected of having influenza
- ask contacts to go home and stay at home until advised otherwise.

3.6 Staff and Student Travel

The Ministry of Foreign Affairs and Trade, in conjunction with MoH, will publish appropriate travel advisories for people traveling to other countries infected by the pandemic (www.mfat.govt.nz). They will also provide advice for government staff and other New Zealanders in infected areas.

Once a pandemic is recognised, the border may immediately be closed to all incoming passengers and aircrew, possibly for several days.

It is likely that quarantine measures will be set up before passenger movements resume. It is possible that all incoming people will be required to complete at least 8 days quarantine before being allowed past the border.

If our staff travel overseas for business reasons, our plan will need to consider their management in the event of a pandemic. Similarly, international students or New Zealand students returning to New Zealand for education will need consideration in the event of a pandemic. For example, on declaration of a pandemic, if any staff or students have recently (within the last 4-5 days) visited countries known to be affected by the disease, we will:

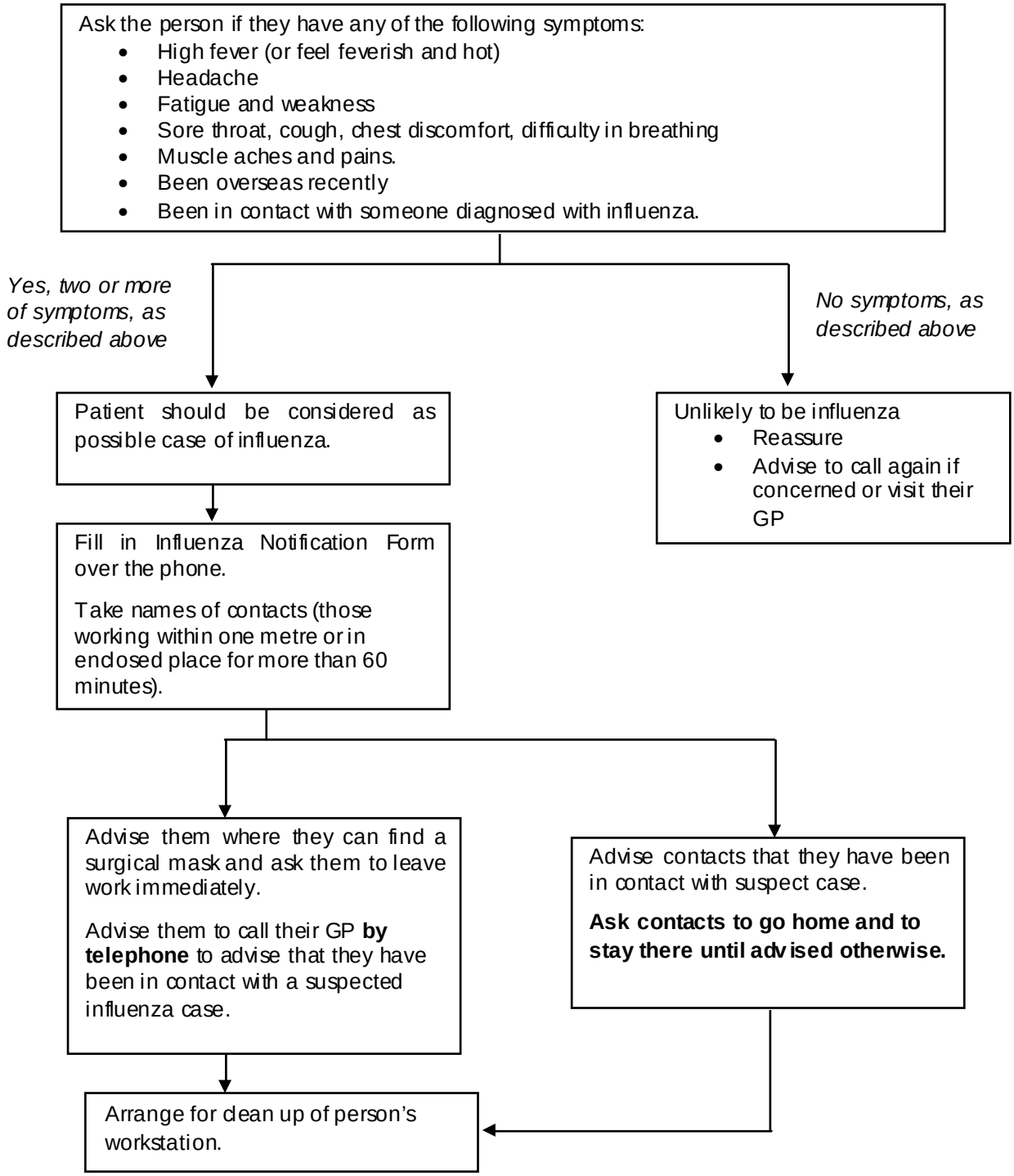
- advise the employee or student not to report for work or education for the duration specified by MoH for the disease (8 days as at October 2005)
- ask them to follow instructions on MoH's website for self-checking for influenza symptoms, which may include advice to telephone (rather than visit) their medical centre to seek advice immediately if symptoms occur.
- check on the staff member or student during his/her absence
- set up a process for ensuring that the employee or student has completed the time duration and is healthy before allowing them to return to work or education.

Border closures overseas may also cause disruption to travel.

Screening Checklist for Detection and Management of Suspected Pandemic Influenza Cases

Process

1) The influenza manager receives a call from a person suspecting they may have influenza
2) Do not visit the person if this can be avoided – manage the process over the telephone
3) Follow the flowchart below



SUSPECTED INFLUENZA CASE
NOTIFICATION FORM

Details of Affected Staff/Students

Name:	Site:	Location of isolation:
Job title:	Nationality if visitor to site:	Date of birth:
Address:		
Telephone no: _____ (W) _____ (H) _____(M)		
Symptoms noticed: Fever ☐ Body aches ☐ Headache ☐ Fatigue ☐ Dry cough ☐ Others ☐ Details: _____ Cold ☐ Time of fever on-set: _____ Time of isolation: _____		
Travel history over the past 8 days: Countries visited _____ Flights taken: _____		
Where referred:		
Contact List (See separate page)		

Details of Reporter

Name:
Job title:
Telephone no: _____ (W) _____ (H) _____ (M)

CONTACT LIST

MoH currently defines pandemic influenza contacts as people who have had close physical (less than one metre) or confined airspace contact with an infected person, within four days of that person developing symptoms. These are likely to include family members and/or other living companions, workmates, classmates (if in close contact situations or confined airspace environments), and some recreational companions.

> Note that the definition of a contact is likely to change once the nature of the pandemic strain is known. Employers should refer to MoH's website during a pandemic for up-to-date guidance.

This list will be retained and provided to the Medical Officer of Health or his/her designated officer on request.

People the affected person has interacted with since displaying symptoms			
Name	**Email**	**Telephone**	**Address**

3.7 Personal Protection Equipment

The following information provides the best guidance available as at October 2005. In the event of a pandemic, refer to MoH's website for latest information.

Using masks

People with influenza symptoms should use a disposable surgical mask to help prevent exposing others to their sneezes and coughs.

Used masks must be disposed of as soon as they become moist or after any cough or sneeze, 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.

Parents will be discouraged from entering classrooms.

3.8 Where Can We Find More Information?

The following websites provide further information about pandemic influenza:

- ***Ministry of Health*** (www.moh.govt.nz/pandemicinfluenza) – background information about influenza, National Health Emergency Plan, pandemic preparedness, planning, etc.
- ***World Health Organisation*** (www.who.int/csr/disease/avian_influenza/en/index.html) – updates of global situation, pandemic phases, fact sheets
- ***Ministry of Education*** *(http://www.minedu.govt.nz/index.cfm?layout=document&documentid=10903&indexid=10898&indexparentid=6088)* – includes pandemic planning information relevant to the education sector.
- ***Vancouver Coastal Health*** (www.vch.ca/public/communicable/pandemic.htm) – includes PDF chapters for private sector organisation planning, local government planning and self-care, as well as other topics. User-friendly "hand-outs".
- ***Centres for Disease Control and Prevention*** (www.cdc.gov/flu/avian/) – background information about avian influenza, how it is spread, vaccines, outbreak information, travel advice and professional guidance.

Appendix 1: Background Information on Influenza Pandemic

WHY PLAN FOR INFLUENZA PANDEMIC?

What is an "Influenza Pandemic"?

Influenza pandemics are characterised by the spread of a novel type of influenza virus to many parts of the world, causing unusually high morbidity (illness) and mortality for perhaps two to three years. Most people do not have immunity to the virus and therefore are susceptible to influenza infection. A pandemic can overwhelm the resources of a society due to the exceptional number of those affected.

A pandemic may occur as a result of the emergence of a new viral sub-type with the capacity to spread efficiently from human to human.

What does an Influenza Pandemic Look Like?

Past pandemics over the centuries have swept quickly through populations, and left considerable damage in their wake. Recovery was impeded by the tendency of pandemics to recur in second and third waves. Age groups and geographical areas not affected initially may prove vulnerable during subsequent waves.

For example, in the 1918-1919 "Spanish flu" pandemic[15], there were three waves. For whatever reason, the virus in the first wave, in June – July, caused illness that appeared to be indistinguishable from seasonal influenza. In November, a far more virulent illness appeared. (The first wave provided some protection from the second – those who became ill in the first wave were less likely to get sick in the second wave.) The third wave, in 1919, was much smaller and less intensive than the previous two.

By contrast, the 1957-1958 "Asian flu" pandemic was essentially one long wave, lasting about 3 months, with a very high total attack rate (possibly 70% - 80% of the NZ population) and no significant following waves. The mortality rate was very low.

It is not possible to predict pandemic wave activity or other features before a pandemic. It is probably safe to say that if there is a very large wave with a very high total attack rate (as in 1957) there won't be another of any size resulting from the same virus (or a slightly mutated form) because a high proportion of the population will have developed natural immunity. However a 20% wave wouldn't preclude another larger one at a later stage (as in 1918).

Current national planning aims to keep influenza out of New Zealand or substantially delay its entry, and if it arrives, control clusters within New Zealand until a vaccination campaign could be run. Vaccination will protect the general population against pandemic influenza. However, given the time lapse (several months at least) between virus recognition and production of a vaccine, planning must take into account the possibility that the pandemic may reach New Zealand, and that there may be more than one "wave" of illnesses.

[15] Globally, the Spanish flu pandemic is estimated to have killed 20 to 50 million people. This pandemic disproportionately affected young people aged 20 to 40. Death was sudden, often within 24 hours. In New Zealand, over 8,000 people died. In Western Samoa, 20 to 25 percent of the population died. By contrast American Samoa, which closed its borders, had no deaths.

MoH has also prepared a number of possible scenarios to assist with planning for pandemic influenza – these are in Appendix 2. In addition, the international weekly journal of science, *Nature*, illustrates how a pandemic might play out with a future scenario in the form of a blog (www.nature.com/nature/journal/v435/n7041/full/435400a.html).

How Likely is an Influenza Pandemic?

The World Health Organisation (WHO) and MoH advise that it is certain there will be an influenza pandemic at some time in the future, but no-one can say when.

On average, influenza pandemics occur three times every century, but with no recognisable pattern in timing. In the last century, pandemics occurred in 1918-1919 (the "Spanish flu"), 1957-1958 (the "Asian flu"), and 1968-1969 (the "Hong Kong flu").

The WHO considers the risk of avian influenza morphing into the next pandemic to be very high. The H5N1 virus has recently expanded its geographical area: originally it had affected several east and southeast Asian countries,[16] but recently has spread to Russia, Kazakhstan, Turkey, Rumania and Greece. Even if the risk from avian influenza goes away, another influenza virus can be expected to come along months or years later.

The WHO is advising Governments worldwide to take precautionary measures and develop pandemic influenza response plans.

What is Avian Influenza ("Bird Flu")?

Bird flu or avian influenza is a contagious viral infection that can affect all species of birds. Migratory waterfowl (ducks and geese) are a natural reservoir for avian influenza virus overseas, and may carry the viruses without becoming ill. Fortunately, New Zealand is not on the regular migratory pathways of any waterfowl and only very occasionally do waterfowl reach our shores, generally originating from southern Australia.

Bird flu outbreaks among chickens and other birds occur from time to time around the world due to a variety of strains of avian influenza virus. The current outbreak of highly pathogenic avian influenza (HPAI) due to the H5N1 strain is of concern because of the size of the outbreaks, the number of countries becoming affected and the fact that humans have become infected.

The H5N1 virus is highly infectious among birds and in a number of species can be rapidly fatal. Because of their living conditions domestic poultry flocks are particularly vulnerable to the rapid spread of the disease. The disease is not normally spread to humans but some cases have been reported. Most cases to date appear to have resulted from close direct contact with infected birds. There is no suggestion yet that the virus is easily spreadable from person to person.

Clinical experts are, however, concerned at the potential for H5N1 to adapt to humans and thereby acquire the ability to spread readily from human to human. If this happens there could be a worldwide influenza pandemic. The WHO considers the current risk to be high, and is advising Governments worldwide to take precautionary measures and develop pandemic influenza response plans.

[16] As at September 2005, the East Asian and South East Asian countries known to be, or which have been affected, are Japan, China, Korea, Laos, Vietnam, Thailand, Cambodia and Indonesia, Mongolia. The Central Asian countries affected are Russia and Kazakhstan. European countries affected are Turkey, Rumania and Greece.

Why Should New Zealanders be Concerned?

Beginning in late July 2005, official reports to the World Animal Health Organisation from government authorities indicate that the H5N1 virus has expanded its geographical range. Both Russia and Kazakhstan reported outbreaks of avian influenza in poultry in late July, and confirmed H5N1 as the causative agent in early August. Deaths in migratory birds, infected with the virus, have also been reported. Outbreaks in both countries have been attributed to contact between domestic birds and wild waterfowl via shared water sources.

These are the first outbreaks of HPAI recorded in the two countries. Both countries were previously considered free of the virus.

In mid October, Turkey, Rumania and Greece reported outbreaks of avian influenza, and confirmed H5N1 as the causative agent.

Experience in south-east Asia (Viet Nam, Thailand, Cambodia, and Indonesia) indicates that human cases of infection is rare but that there is a high mortality rate (there have been 112 laboratory-confirmed human cases of avian influenza December 2003, of which 57 were fatal). Most, but not all, human cases have been linked to direct exposure to dead or diseased poultry, notably during slaughtering, de-feathering, and food preparation.

Influenza viruses are highly unstable. This means that over time, viruses change and may develop the ability to readily infect humans. Also, when animal influenza viruses are circulating at the same time as human viruses there is potential for the two to "meet" and create a new influenza virus to which humans would have little, if any, protective immunity, and which can spread easily from person to person.

H5N1 is showing signs of changing and the expanding geographical presence of the virus creates expanded opportunities for human exposure. The emergence of an HPAI strain that is readily transmitted among humans would mark the start of a pandemic.

Where Can We Find International Information Updates?

The WHO's website (www.who.int/csr/disease/avian_influenza/en) provides updates on the global occurrence of avian influenza, risks to humans, vaccine and anti-viral developments. It also provides useful background information about the nature and characteristics of avian influenza and past pandemics.

For an international perspective and updates on infection in birds, see www.oie.int/download/avian influenza/a_ai-asia.htm.

The New Zealand Ministry of Health's website (www.moh.govt.nz/pandemicinfluenza) also provides much relevant information.

WHAT ARE THE SYMPTOMS OF INFLUENZA AND HOW IS IT SPREAD?

What are the Symptoms of Influenza?

Influenza is a highly contagious viral disease of the respiratory tract.

Influenza is characterised by rapid onset of respiratory and generalised signs and symptoms including: a high fever, headache, muscle aches and pains, fatigue, cough, sore throat, or a runny nose.

What is the Difference Between Influenza and a Common Cold?

SYMPTOM	INFLUENZA	COMMON COLD
Fever	Usual, sudden onset 38^{o}-40^{o} and lasts 3-4 days.	Rare
Headache	Usual and can be severe	Rare
Aches and pains	Usual and can be severe	Rare
Fatigue and weakness	Usual and can last 2-3 weeks or more after the acute illness	Sometimes, but mild
Debilitating fatigue	Usual, early onset can be severe	Rare
Nausea, vomiting, diarrhoea	In children < 5 years old	Rare
Watering of the eyes	Rare	Usual
Runny, stuffy nose	Rare	Usual
Sneezing	Rare in early stages	Usual
Sore throat	Usual	Usual
Chest discomfort	Usual and can be severe	Sometimes, but mild to moderate
Complications	Respiratory failure; can worsen a current chronic condition; can be life threatening	Congestion or ear-ache
Fatalities	Well recognised	Not reported
Prevention	Influenza vaccine; frequent hand-washing; cover your cough	Frequent hand-washing, cover your cough

How is Influenza Spread?

Influenza is spread from person to person in the respiratory droplets generated by coughs and sneezes. It can also be spread when a person comes into contact with the respiratory droplets of another person by touching items on which droplets are present, and then touches their own eyes, mouth or nose before washing their hands. The virus may enter through the eyes, or more commonly through the nose or mouth, and into the throat and lungs where it begins to multiply. The time from first exposure to when symptoms begin is one to four days.

The disease damages the linings of the respiratory tract. Secondary bacterial infections, such as pneumonia, meningitis, sinus and ear infections can then take hold.

How Long is the Influenza Virus Infectious?

It is not known for certain, if people with influenza are infectious before developing symptoms. An adult with influenza is infectious once they show symptoms, and for some days after. Children have been shown to remain infectious for up to 21 days, long after symptoms have disappeared. Some individuals may become infected but never show symptoms.

Influenza viruses may be able to live for up to two days on hard surfaces such as doorknobs, handrails, toys, cups, utensils, telephones. Although it can live on these surfaces it is not as infectious as these surfaces are usually dry.

IS MEDICATION AVAILABLE TO PREVENT OR TREAT PANDEMIC INFLUENZA?

Will Vaccine Against Pandemic Influenza be Available?

Vaccines are virus-specific, so pandemic vaccines cannot be produced until the specific pandemic virus has been identified. The time lapse between virus recognition and production is likely to be at least several months, largely because of technical issues around vaccine production. MoH is working to make sure New Zealand gets access as quickly as possible to a vaccine once it is developed and available.

Given that the first supplies of vaccine against a novel strain of influenza are unlikely to be available quickly, it is possible that New Zealand would have suffered at least one pandemic wave before a vaccination campaign can provide population immunity.

Will Anti-viral Medications be Available to Prevent or Cure Pandemic Influenza?

Many complications from influenza are due to secondary infection. Antibiotics are the preferred treatment for secondary infections, although they are ineffective in the treatment of the viral influenza itself.

Anti-viral medication can shorten the course of infection, if given early. They can also provide short-term protection against influenza. Several anti-virals have specific activity against the influenza virus, but only one of these (Tamiflu) is thought to be suitable for widespread general use in a pandemic situation.

It is not known if Tamiflu will be effective against a pandemic strain virus as its use in a pandemic situation is untested. The impact of Tamiflu in aiding pandemic management measures cannot be known until a pandemic occurs and epidemiological evidence is available.

MoH is stockpiling sufficient Tamiflu to treat 21% of the population, for use if a pandemic occurs. Careful prioritisation of its usage is essential, and exact priorities cannot be identified until the pandemic strain is identified and its epidemiology understood (e.g. which age groups in the population are likely to be the worst affected). Current draft policy envisages that Tamiflu will be used intensively in the early stages as part of a number of initiatives for control of small clusters of illness. If and when the pandemic affects many areas of New Zealand, its usage will be reserved for treatment, and further prioritisation may be required (e.g. for cases at higher risk of complications or death).

Further information and updates about Tamiflu may be found on MoH's website (www.moh.govt.nz/pandemicinfluenza).

Appendix 2: Pandemic planning scenarios

Scenario 1 Schools / 'Cluster control' phase

Ministry of Health reports influenza cases in the Canterbury region. The affected area has been 'ring fenced' by health officials, with no movement in or out. Some schools within the affected area have closed. The Minister of Health (MoH) announces a cluster outbreak in Canterbury on the TV and radio news. Other media reports are giving varying advice on what to do. Your school is in the Canterbury region, which has no reported cases.

1 Get Ministry of Health advice via news media and the MoH website. MoH advice is for schools in your area to remain open but to be on heightened alert.

2 Your school gets ready to implement its pandemic response plan, according to Ministry of Health advice:

- review all contact details of staff, students, parents and caregivers (two local emergency contacts required for each person)
- principal and board clarify decision making protocols, including key roles, responsibilities, phone trees etc
- keep students, parents and staff informed through regular newsletters, emails
- monitor people who have recently returned from affected areas (NZ and overseas) for symptoms
- inform regional Medical Officer of Health of any symptoms in students or staff
- send copy of current student roll (international students identified), emergency contact lists, staff, parent and volunteer lists to local CYF office.

3 There are no symptoms reported at your school. Your pandemic response plan focuses on:

- keeping students, staff and parents informed of what's happening through newsletters, emails, websites
- ongoing monitoring of staff and students
- managing travel of students and staff into affected area(s) e.g. camps and school visits
- maintaining contact lists
- maintain emergency supplies including food and water, facemasks, gloves and cleaning equipment.

4 The pandemic outbreak in the Canterbury region is successfully contained and is eventually stamped out:

- continue to maintain accurate contact lists
- continue to keep students, staff and parents informed through normal communication channels
- continue to promote good hygiene practices

Scenario 2 Early childhood centre / 'Cluster control' phase

An early childhood education service within your region reports a growing number of children showing symptoms of pandemic influenza. Health officials limit movement in and out of your district, ban unnecessary public gatherings and close education facilities. There has been no advice from health authorities for education facilities in neighbouring district to close.

1 Contact your regional medical officer of health and report cases if they arise
- Manager and supervisor discuss your centre's pandemic plan and agree on the correct response for your centre
- activate decision making and communication protocols

2 Monitor health of staff and children
- record names of people showing symptoms
- inform parents
- inform Medical Officer of Health

3 Communicate directly with staff and parents
- parent and staff meetings not suitable if health officials advise against social gatherings
- newsletters and email
- websites
- set up info line for parents to call at centre

4 Contact pre-approved volunteers, place on standby

5 Update contact lists
- centre rolls, parents
- staff
- volunteers
- district health nurse
- send lists to central CYF office on disc

6 Carry out drills and practise-runs for staff and students
- avoid panic and hype
- general education, know the symptoms, promote good hygiene
- practice telephone trees
- trial home activities

7 Check emergency supplies
- food and water
- medical supplies
- personal protective equipment
- cleaning equipment

Scenario 3 Tertiary institution / 'Manage it' phase

Students at your polytechnic are showing symptoms of pandemic influenza. There is a sharp increase in absentees and concerning reports coming in from flatmates and parents of sick students.

1 Contact your regional medical officer of health and report cases
   - governance and management discuss pandemic plan and agree on the correct response for your polytech
   - activate decision making and communication protocols

2 Monitor health of staff and students
   - record names of people showing symptoms
   - inform Medical Officer of Health

3 Communicate directly with staff, students (and parents if appropriate)
   - personally addressed letters to students, informing them of the situation
   - letters of emails to staff clarifying response plan including key roles and responsibilities
   - updates in newsletters, email broadcasts and polytech website
   - set up free phone info line for students to call

4 Update contact lists
   - class rolls, two local emergency contacts
   - staff
   - volunteers
   - student health centre
   - send lists to central CYF office on disc

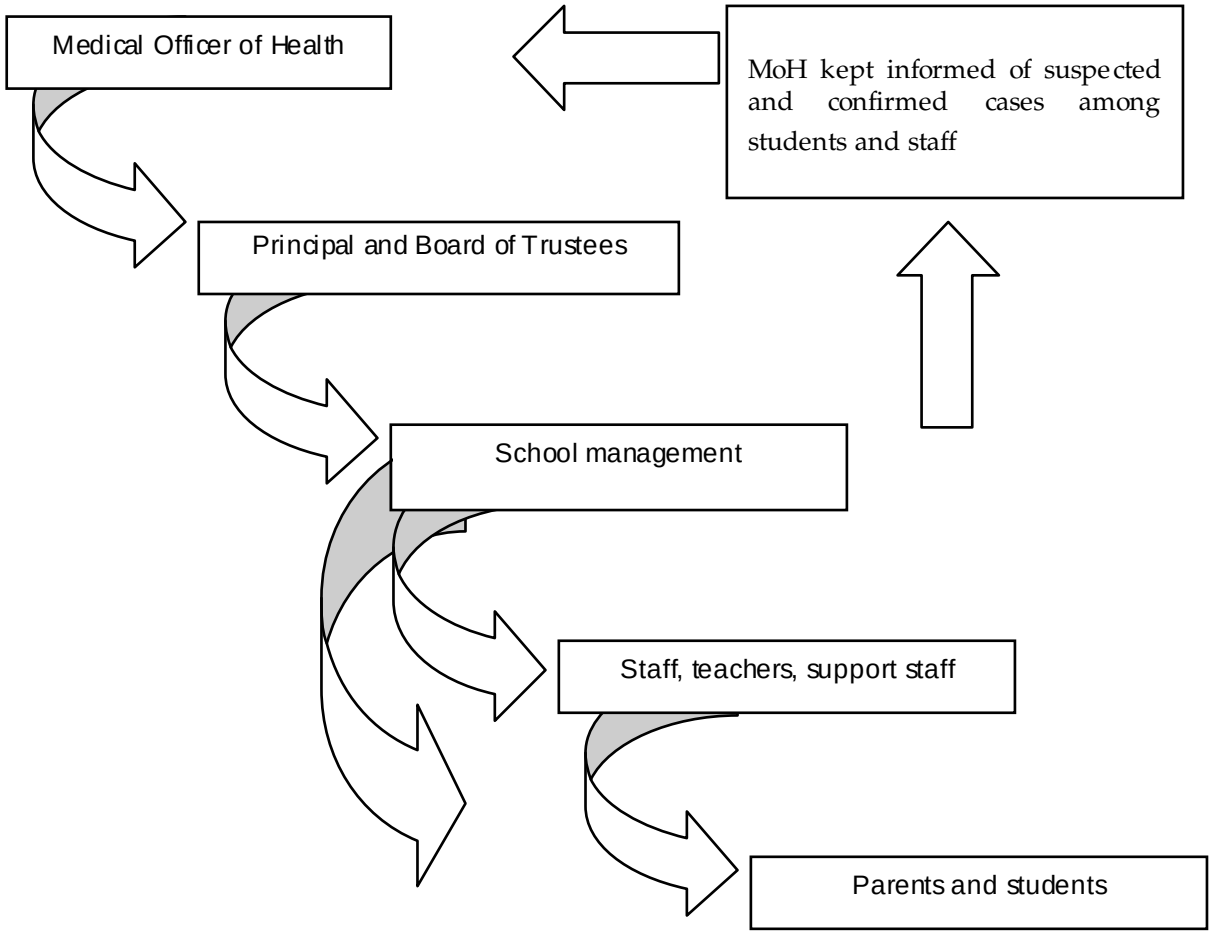
5 Contact pre-approved volunteers, place on standby

6 Work with health authorities on polytech closure procedures
   - inform students
   - prepare home assignments
   - put up on site signage
   - clean affected areas
   - prepare polytech for alternative uses e.g. vaccination centre

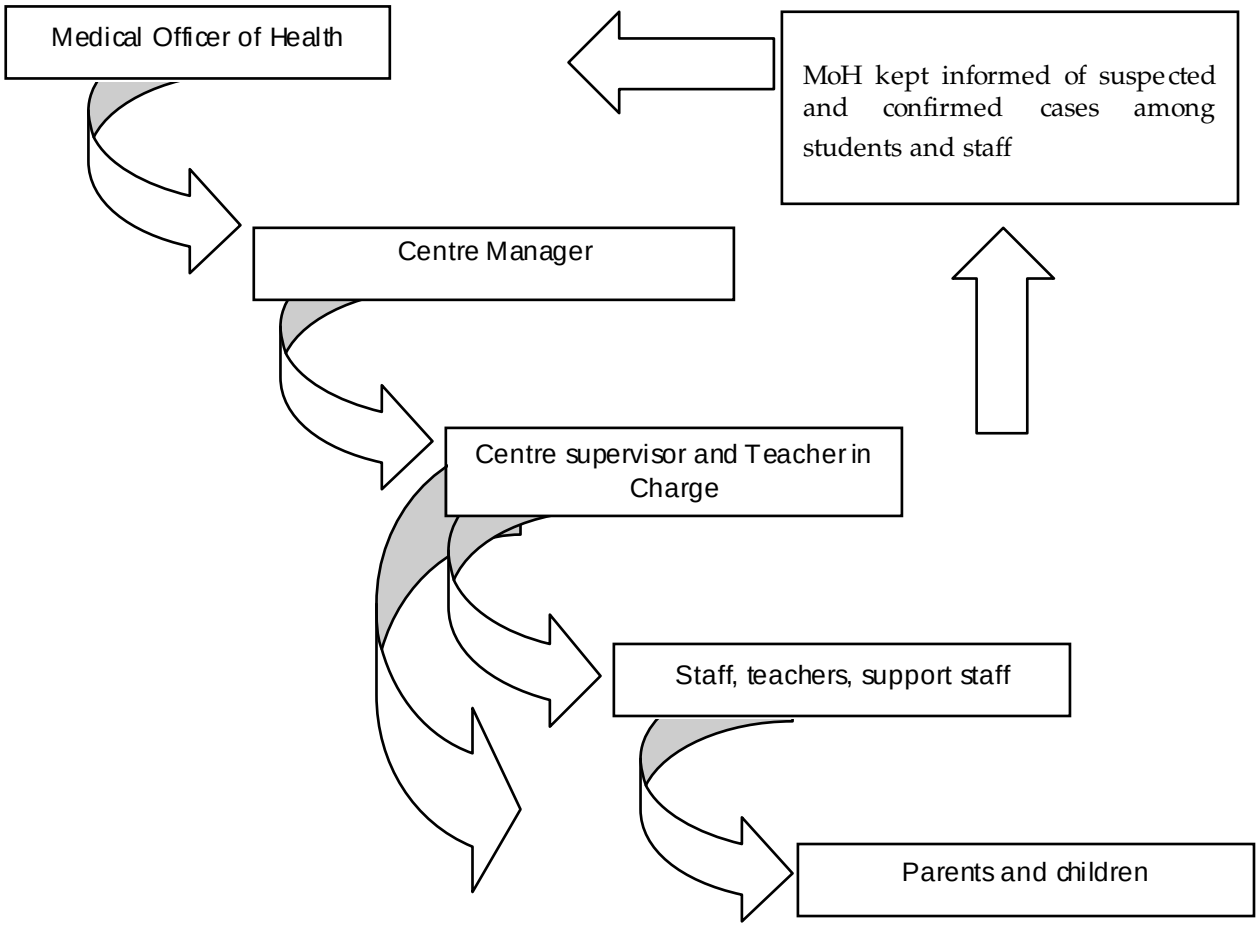
Appendix 3: Sample decision making and communication trees

Education services should follow Ministry of Health advice at every stage of a pandemic. MoH announcements will be made through media reports and on their website. There will also be direct communication with education organisations from the Medical Officer of Health (DHB). All major decisions such as facility closures should be made in close consultation with district health authorities.

Pandemic planning - decision making and communication process for schools



Pandemic planning - decision making and communication process for early childhood education centres



Pandemic planning - decision making and communication process for tertiary education providers