Advice for residential institutions,
early childhood education centres
and schools on managing
cases and outbreaks of influenza

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Summary and key points

Influenza (the flu) is a very infectious respiratory illness caused by influenza viruses, and is much more common in the winter months. All influenza strains have the same symptoms and signs, spread from person to person in the same way, and are treated similarly.

Most people who develop influenza will have mild to moderate symptoms and will recover at home without needing medical treatment. However, some people are at higher risk of developing complications if they get influenza, and especially if they get pandemic influenza H1N1, including pregnant women, people with morbid obesity, children under 5 years of age, older people and people with some chronic health problems.

Influenza spreads easily from person to person, especially in residential institutions, early childhood education centres (ECECs) and schools, and these institutions may also serve people who are at higher risk of complications. This document provides advice for these institutions on planning for, prevention of and management of cases and outbreaks of influenza.

The key points for residential institutions, ECECs and schools are:

- Residential institutions, ECECs and schools are at higher risk of influenza spread, leading to outbreaks, than the rest of the community. Strong infection control procedures are essential for these institutions.
- Plan in advance for what to do if you have cases or an outbreak of influenza in your institution.
- Take steps that will help prevent cases or an outbreak of influenza in your institution.
- If cases occur, prompt action is necessary to prevent infection spread.
- Sick staff should not come to work. If staff develop a flu-like illness while at work, they should go home immediately.
- Residents, ECEC attendees or students who develop a flu-like illness should go home to recover if possible. If they cannot go home, they should be isolated from other people and receive priority medical attention.
- Visitors with a flu-like illness should not visit these institutions.
- Residential institutions may wish to seek advice from ARPHS if they appear to be having an outbreak of influenza.
- Residential institutions, ECECs or schools can also contact ARPHS if there are increasing numbers of cases, or if the institution is unable to maintain effective infection control.

This document will be updated regularly. The most up-to-date version will be available on the ARPHS website (http://www.arphs.govt.nz).
1. About influenza

Influenza (the flu) is a very infectious respiratory illness caused by influenza viruses. Influenza can occur at any time of the year but is much more common in the winter months.

Pandemic influenza H1N1 2009 (swine flu) was a new influenza strain that emerged in 2009, spread quickly around the world and is still expected to occur around the world and in New Zealand for some time. As the global influenza pandemic that started in 2009 is now over, pandemic influenza H1N1 is now considered a seasonal influenza strain.


What are the symptoms and signs of influenza?

The symptoms and signs of seasonal influenza, pandemic influenza H1N1 and any other strain of influenza are essentially the same. Illness due to influenza usually starts very suddenly, and may include the following symptoms and signs of a ‘flu-like illness’:

- fever (a temperature $\geq 38^\circ C$)
- sore throat
- cough
- headache
- muscle aches
- chills
- runny or stuffy nose
- extreme tiredness
- nausea, vomiting and diarrhoea can occur (more common in children).

What is the definition of a ‘flu-like illness’?

An influenza-like illness (a flu-like illness or ‘ILI’) is currently defined by the Ministry of Health as:

(i) history of fever, chills and sweating or clinically documented fever $\geq 38^\circ C$, plus

(ii) cough or sore throat.

How does influenza spread?

All types of influenza are spread in the same way, from person to person. The main way influenza spreads is through the coughs or sneezes of an infected person. Infected droplets are released into the air and breathed in by others. However, these droplets do not remain in the air long and generally only affect people within two metres. It is also possible to get influenza by touching contaminated surfaces, and then touching your nose, mouth or eyes.
How severe is the illness?

Most people who develop influenza will have mild to moderate symptoms and will recover at home without needing medical treatment.

However, some people are at higher risk of developing complications if they get influenza, and especially if they get the pandemic influenza H1N1 strain. People at higher risk include people who:

- are pregnant or have recently been pregnant (up to 2 weeks after giving birth)
- have morbid obesity (are very overweight)
- have cardiovascular disease (ischaemic heart disease, congestive heart failure, rheumatic heart disease, congenital heart disease and cerebrovascular disease)
- have chronic respiratory disease (asthma if on regular preventive therapy, other chronic respiratory disease with impaired lung function)
- have diabetes
- have chronic renal disease
- have any cancer (except non-invasive basal and squamous skin cancers)
- have other conditions, including immune compromising conditions or immune suppressing treatments (autoimmune disease, HIV, transplant recipients, neuromuscular and central nervous system diseases, haemoglobinopathies, children on long term aspirin)
- are young (children under 5 years of age, especially Maori and Pacific children), or old (65 years of age or older).

What is a ‘case’?

In this document, a ‘case’ refers to a person who has:

a) laboratory confirmed influenza virus infection (confirmed case), or

b) a person with an influenza like illness who has a strong link to a confirmed case or defined cluster (probable case).

Cases are important both because they are unwell and also because they are infectious to others, particularly in the first few days and while they remain unwell.

What is a ‘contact’?

A ‘contact’ is a person who has had close contact with a case.

Close contact is defined as having cared for, lived with, or had direct contact with respiratory secretions or bodily fluids of a probable or confirmed case (e.g. having been coughed on or sneezed on by the case).
2. Which institutions does this document cover?

This document is intended to provide advice primarily for closed residential institutions (including prisons, boarding schools, residential care facilities, refugee institutions and other residential facilities). Some of the advice in the document may also be useful for non-residential institutions (especially early childhood education centres (ECECs) and schools).

The advice in this document is not primarily intended for health care facilities such as hospitals.

3. Why are these institutions at higher risk?

There are a number of reasons why residential institutions are at higher risk from the spread of influenza viruses:

- They contain large numbers of people in close proximity for extended periods of time, leading to a high risk of spread.
- Due to their residential nature, these institutions may not always be able to ask people to recover at home, so may need to isolate sick people within the institution.
- Some residential institutions serve people amongst whom the flu virus is more likely to spread (e.g. those with diminished ability to self-care and/or diminished ability to comply with infection control measures).
- Some residential institutions also serve people who are at high risk of flu complications.

Early childhood education centres (ECECs) and schools are not residential institutions, but are also high risk settings for increased spread of influenza viruses (ECECs and schools) and contain people who are at increased risk of complications if they get sick (ECECs, and some schools serving special needs children).

Young children are less competent at good hand hygiene and at covering their coughs, and frequently put their hands in their mouth, increasing the risk of the transmission of infection. Children aged under 5 are also infectious to others for a longer period, can transmit infection to others even when they have no or very few symptoms themselves, and are at higher risk of developing complications of influenza.

Schools quite commonly experience high rates of seasonal influenza amongst students and staff during the annual flu season.

4. What to do if cases or outbreaks have not yet occurred

Use this time to ensure that your institution is prepared should influenza cases occur.

You can also take measures to reduce the likelihood of influenza cases occurring in your institution. Most of these measures are also useful to prepare for seasonal influenza i.e. even when there is no pandemic.
Planning measures

Review your pandemic influenza plan, and ensure that you have an active business continuity plan to deal with illness in residents, visitors and staff.

Important issues to consider in your planning include:

- Will it be possible to exclude sick residents (see 5.1 below) if necessary, so that they can recover at home?
- How likely are residents in your institution to be able to comply with isolation and infection control measures?
- If you expect to use personal protective equipment (PPE):
  - Ensure that you have access to stocks of PPE if necessary.
  - Ensure that education and training is provided to staff to ensure the equipment is used and disposed of correctly. If PPE is not used or disposed of correctly, it may increase (rather than decrease) a person’s risk of transmission.
- What will be the impact on others if sick residents are asked to recover at home (e.g. working parents, in the case of school boarding houses or ECECs)?
- How high is the risk that the virus will spread within this institution (see ‘Why are these institutions at higher risk?’)?
- Is complete closure of the institution realistically possible?

Measures for residents

- Encourage increased attention to cough/sneeze etiquette, hand hygiene and other hygiene measures. Encourage all residents to clean hands before eating, and before and after communal activities.
- Advise residents to report flu-like symptoms at once. Residents reporting flu-like symptoms should be isolated (see ‘What to do if there is a case’) and receive priority GP assessment. During a pandemic, antiviral treatment (Tamiflu) may be recommended on clinical grounds by the GP (based on severity and/or whether case is in high risk group) and/or on public health grounds by ARPHS (to help control outbreaks in high risk settings).

Measures for staff

- Encourage increased attention to cough/sneeze etiquette, hand hygiene and other routine infection control measures. Encourage staff to clean hands before eating, and before and after communal activities.
- Have a clear staff sickness policy of which all staff are aware. Encourage staff to call in sick and stay at home if they are unwell. If staff become sick at work, send them home immediately.
- Staff who develop a flu-like illness should consult their GP, who may test for influenza and prescribe antiviral treatment if indicated.
• During a pandemic, preventive use of antivirals (pre-exposure prophylaxis) is not recommended for staff. Instead use social distancing/PPE/effective isolation of sick residents.

• During a pandemic, post-exposure antiviral prophylaxis for staff may be indicated on a case by case basis (e.g. if there has been a significant failure of PPE).

Measures for visitors

• Ensure sick visitors stay away. All people arriving to visit should be reminded/asked about symptoms on arrival and should use hand gel before entry. Clear information and posters will assist with this.

Cleaning measures

• The risk of infection can be reduced by increasing cleaning of areas with frequent hand contact. Clean all areas and items that are more likely to have frequent hand contact (like doorknobs, taps, handrails) routinely (e.g. daily, before/after meals, as needed) and also immediately when visibly soiled. Use the cleaning agents that are usually used in these areas. Disinfection of environmental surfaces beyond routine cleaning is not required.

Other measures to consider

• Encourage vaccination for seasonal influenza, where appropriate, to reduce the number of staff and residents who become unwell with influenza. (Note: the 2011 vaccine includes the pandemic strain.)

• Influenza can spread in inadequately ventilated internal spaces. Ensure windows can be opened and air-conditioning systems are properly designed and maintained. It is advisable that air handling systems do not re-circulate air and are vented to the outside wherever possible.

If a resident or a staff member is known to have been in contact with a person with confirmed influenza:

• Encourage increased attention to cough/sneeze etiquette, hand hygiene and other hygiene measures, and advise the person to report flu-like symptoms promptly.

5. What to do if cases or outbreaks occur

The aim is to minimise exposure of other residents, staff and visitors to infectious cases, while ensuring that the needs of the case are also met.

Key points:

• Staff members with a flu-like illness should be sent home immediately, and should consult their GP, who may test for influenza and prescribe antiviral treatment if indicated.
• Visitors with a flu-like illness should be asked to leave immediately. For special circumstances where visits are high priority (e.g. a resident is terminally ill), sick visitors should wear a surgical mask, and ensure hand hygiene and cough/sneeze etiquette.

• Residents with a flu-like illness should be isolated (see below) and medically assessed by a GP, who can test for influenza and prescribe antiviral treatment if indicated clinically.

• Institutions should work with their usual primary care services for advice regarding treatment and care of ill individuals.

• Survey residents and staff to identify whether any other people have a flu-like illness.

• Note that seasonal influenza is not a notifiable disease (this also includes pandemic influenza H1N1, which is now considered a seasonal strain, and is no longer notifiable from 1 January 2011).

• Residential institutions may wish to contact ARPHS for advice if you have an outbreak of influenza (i.e. beyond what is usual for the time of year), or if you note increasing numbers of cases, or are otherwise unable to maintain effective infection control. The manager of the institution is likely to be the best person to communicate with ARPHS.
  - Contact details are at the beginning of this document and on the ARPHS website.
  - Normal business hours are the best time to contact ARPHS.
  - ARPHS is likely to provide advice and answer questions to assist your management of the situation. We will want to know about your institution (type, number of residents and staff, high risk residents) and the outbreak (cases and onset dates, numbers, measures already in place).

• Refer to your institution’s usual processes regarding communication with residents, relatives and other agencies.

5.1 Exclusion

What does exclusion mean?

Exclusion means that people who are sick go home and do not return to the institution until they are no longer infectious. Exclusion would usually be used in a pandemic situation, rather than for seasonal influenza.

People who are excluded should be given information about reducing spread of the virus within the household. More information is available on the Ministry of Health website at http://www.moh.govt.nz.

During transport from the institution to home, if they may come into contact with others (closer than 1 metre), cases should be advised to wear a surgical mask and to practise frequent hand hygiene measures. Forms of transport that minimise contact with other people should be preferred (i.e. public transport should be avoided).
Cases should be excluded until essentially well, that is not sneezing and coughing, as this is how the virus spreads. This is usually around 3 to 4 days after symptoms start, but may be up to a week. If in doubt, discuss with their doctor. Antiviral treatment may be recommended for high risk people by their GP.

Exclusion is likely to be more effective than isolation at stopping the virus from spreading within an institution, so exclusion is preferable to isolation when possible.

Is exclusion possible?
All sick staff should be excluded, except in some situations where this is difficult (e.g. staff live on-site). If sick staff are unable to be excluded, they should be isolated from other people.

For some institutions, excluding residents may be more difficult. This may include situations where:

- There are legal requirements for residents to remain within the institution (e.g. prisons).
- Residents need special care that is available within the institution and may be difficult to provide at home (e.g. some aged care residents).
- Residents do not have another home to go to (e.g. some residents at a refugee centre).
- A resident’s home is very distant, so that transport to their home is difficult and could involve exposing other people (e.g. during air travel).

Exclusion may be particularly important where:

- proper, effective isolation is unlikely to be achievable
- staff are unlikely to be able to protect themselves adequately from isolated residents because social distancing is not possible and PPE supplies and/or training are not available.

Balancing these considerations may be difficult. ARPHS may be able to provide advice in such difficult situations.

5.2 Isolation
If sick residents are unable to be excluded, or if exclusion is not necessary, they should be isolated from other people.

Cases should be isolated until essentially well, that is not sneezing and coughing, as this is how the virus spreads. This is usually around 3 to 4 days after symptoms start, but may be up to a week. If in doubt, discuss with their doctor. Antiviral treatment may be recommended for high risk people by their GP.

What does isolation mean?

- Place people with a flu-like illness in isolation – preferably a single room with a dedicated ensuite or toilet.
• Arrange medical assessment, including swab taking for the first few cases, and antiviral treatment if clinically indicated.

• Signage, stating the patient is in isolation, should be posted on the door of their room or wherever the isolation zone begins.

• Movement of patients out of isolation rooms should be restricted to essential purposes.

• If possible, airflow should be vented to the exterior of the building from the room(s) such as by opening exterior windows. Influenza can spread in inadequately ventilated internal spaces.

• Non-essential staff should be prevented from entering isolation rooms.

• If possible, cases should wear surgical masks during any contact with staff and visitors.

• Staff who have contact with residents in isolation should follow the personal protective measures shown in Appendix 1. The level of personal protective measures required depends on the extent to which contact can be avoided, in particular whether staff can remain at least 1 metre from residents.

• No staff or visitors should enter the isolation room unless familiar with isolation procedures. The importance of hand hygiene after removing personal protective equipment such as masks and gloves (if using) should be highlighted to staff and visitors.

• Group together (‘cohort’) residents who are known or suspected to have seasonal influenza or pandemic influenza. If there are a number of cases, consider cohorting them in the same room(s) or areas/wings.

• Also ‘cohort’ staff who look after cases during an outbreak. This means having the same staff member(s) care for all cases, thereby minimising the number of staff who are exposed to cases.

5.3 **Personal protective measures and equipment**

Personal protective measures and equipment can help to reduce the spread of infection. The type of personal protective measures and equipment that should be used varies depending on the situation.

All people are routinely advised to help stop the spread of flu and other germs by:

• Covering coughs and sneezes.

• Avoiding contact with sick people and reducing time spent in crowded settings.

• Regularly washing their hands and drying them thoroughly.

These are forms of personal protective measures.

Additional personal protective measures are usually necessary during a pandemic, when staff are in contact with residents who have the pandemic strain of influenza. The level of personal protective measures required
depends on the extent to which contact can be avoided, in particular whether staff can remain at least 1 metre from residents. Personal protective equipment (PPE) will not be required in all situations. Appendix 1 contains a summary table of personal protective measures required in different situations.

Education and training on the use of PPE is necessary to ensure the equipment is used and disposed of correctly. PPE that is not used and disposed of correctly may increase (instead of decrease) the risk of influenza transmission. Visitors need to be supervised by staff when putting on and taking off PPE.

5.4 Visitors

Visits to symptomatic cases should be minimised. Visitors must comply with all isolation procedures and should be supervised when putting on and removing PPE to ensure it is properly used and to ensure hand hygiene is thorough.

5.5 Cleaning

Clean all areas and items that are more likely to have frequent hand contact (like doorknobs, taps, handrails) routinely (e.g. daily, before/after meals, as needed) and also immediately when visibly soiled. Use the cleaning agents that are usually used in these areas. Disinfection of environmental surfaces beyond routine cleaning is not required.

Surfaces can be cleaned using standard disinfectants such as bleach. Allow an interval of at least 30 minutes after wiping surfaces with bleach solution before resuming use of that space.

Further information on cleaning is available under the ‘Contamination & Cleaning’ heading, on the swine flu questions and answers page of the Centers for Disease Control (USA) website, at http://www.cdc.gov/h1n1flu/qa.htm#e.

5.6 Other infection control measures

If there is an outbreak of seasonal influenza or pandemic influenza in your institution (i.e. many cases, or the number of cases is increasing rapidly), it may be advisable to limit movement within the facility. For example, this may involve cancelling social and recreational activities, or considering temporarily closing the dining room and serving meals in residents’ rooms, if applicable.

5.7 Residents transferring to other institutions

If you have cases of seasonal or pandemic influenza in your institution and you are transferring a patient, please inform the receiving institution or hospital and transporter prior to arranging transfer.

5.8 Case log for residents and staff

Once an influenza case occurs, a case log should be kept of all residents and staff who have flu-like symptoms. This will help you to keep track of whether case numbers are increasing or decreasing and whether the spread of
infection is under control, and if you seek advice, will enable ARPHS to advise you appropriately.

The case log should include the following information for each person with flu-like symptoms (e.g. as columns in a table or spreadsheet):

- Name
- Age
- Gender
- Whether person is a staff member or resident
- Date symptoms started
- Date symptoms stopped
- List of symptoms (e.g. fever, cough, sore throat, etc)
- Whether swab was done (and date)
- Whether antivirals (Tamiflu, Relenza) were taken (and dates).

5.9 Institutions that have difficulty with the above measures

For a small number of institutions, it may be difficult to effectively implement measures such as exclusion or isolation. For example, a provider of care for children with behavioural difficulties in a small-scale, home-style institution may find it difficult to effectively isolate cases. Continue to follow the above infection control measures that can practically be followed, such as cleaning, staff and visitor policies. In such cases, ARPHS may be able to provide advice on the best approach. In certain circumstances, on a case by case basis, post-exposure prophylaxis with antivirals (such as Tamiflu) may be indicated for close contacts.

5.10 Antivirals, swab testing and contact management

In some situations (e.g. outbreaks in residential institutions), it may be useful to consider the following measures:

- Testing the first few cases for influenza (i.e. the GP takes a nasopharyngeal swab).
- Treatment of cases with antivirals (for those at high risk of complications and/or to reduce infectiousness).
- Post-exposure prophylaxis with antivirals for close contacts and/or quarantine of particularly high risk contacts.

The need for these measures should be assessed on a case by case basis by the GP. ARPHS may be able to provide advice in such situations, especially during a pandemic.

6. Closure of residential institutions

Residential institutions could either be closed to new residents, or closed completely. Closure would usually only be considered in a pandemic situation, rather than for seasonal influenza.
Closure to new residents may be considered if there are influenza cases within the institution, and new residents are at high risk of developing complications from influenza (e.g. have chronic medical conditions).

Closure of an institution may be considered if there are ongoing cases among residents and/or staff despite full implementation of outbreak control measures.

However, closing an institution is a last resort. Any decision to close should be made in discussion between the management of the institution, other agencies as appropriate (e.g. the Ministry of Education for ECECs and schools) and ARPHS.

Other considerations:

- For some residential institutions it may be very difficult to close, while for others it may be less difficult.
- In some situations, part of an institution may be able to close while other parts remain open.
- High staff illness rates may also affect any decision to close an institution if replacement staff cannot be found. Business continuity planning should address this possibility in advance.
- National guidance and policy should be considered in any decision to close an institution.
- Other events may affect closure decisions e.g. school holidays, planned gatherings, etc.
- Any decision to close an institution should be communicated to all relevant agencies and persons using the usual communication channels. Be aware that this may generate media interest.

7. **Early childhood education centres and schools**

Much of the advice for residential institutions is also relevant for ECECs and schools, particularly section 4 (‘What to do if cases or outbreaks have not yet occurred’). Aspects of section 5 (‘What to do if cases or outbreaks occur’) are also relevant, though children will not need to be isolated for long periods of time.

An important difference between ECECs and day schools, compared with residential institutions (including boarding schools), is that it is always possible to exclude children from ECECs and day schools (i.e. send them home), so long-term isolation is not required.

The following key points are relevant to ECECs and schools:

**Planning and prevention**

- Refer to relevant parts of section 4, ‘What to do if cases or outbreaks have not yet occurred’.
Managing staff

- Staff who are unwell should not come to work. Staff who develop a flu-like illness while at work should go home. Staff should stay at home until they are well.

Managing children

- Parents should be specifically asked/reminded not to bring their children to ECEC or to school if they have a flu-like illness.

- The parents/caregivers of children who have flu-like symptoms should be called to collect them, and should be isolated from other children until the parents arrive. Consider personal protective measures for staff supervising children in isolation in accordance with Appendix 1. You need to plan what to do if personal protective measures are unable to be taken by staff supervising children with flu-like symptoms.

- Children under 5 years old are often infectious for longer than adults. They should not return to the ECEC while they still have symptoms. Discuss with their doctor or ARPHS if in doubt.

Managing visitors

- Ensure visitors stay away from the ECEC or school if they are unwell. Clear information and posters will assist with this.

Cleaning

- See cleaning advice in sections 4 and 5.5. Increase cleaning if a staff member or child develops a flu-like illness while in attendance at the ECEC or school.

Other measures

- Keep a sickness log up to date for children and staff who are absent due to flu-like symptoms. If you do not have a template for such a log, the case log in the ARPHS Guidelines for the Management of Norovirus Outbreaks can be adapted for this purpose (see ‘Where can I get more information?’). See also the information in section 5.8, ‘Case log for residents and staff’.

- Contact ARPHS if you are noticing increasing numbers of children and/or staff with flu-like symptoms (beyond what is usual for the time of year i.e. if an outbreak is suspected), or if you are seeking advice.

8. Further information

8.1 Where can I get more information?

The following websites and documents contain useful information on seasonal influenza, pandemic influenza and infection control:

• Influenza page of the ARPHS website, which contains relevant links to the Ministry of Health website, as well as the ARPHS fact sheet about influenza: http://www.arphs.govt.nz/notifiable/influenza.asp.

• Influenza pages of the Centers for Disease Control and Prevention (CDC) website (USA): http://www.cdc.gov/flu/.

• Some institutions, such as those working in aged care, are already familiar with the ARPHS guidelines for managing norovirus outbreaks. Many of the principles for managing outbreaks of influenza and pandemic influenza are similar, including the need for isolation and other infection control measures. However, there are also some important differences, including how the virus spreads and the cleaning measures that are required. The ARPHS Guidelines for the Management of Norovirus Outbreaks in Hospitals and Elderly Care Institutions are available at: http://www.arphs.govt.nz/Guidelines/guidelines.asp.

8.2 ARPHS contact details

You can contact ARPHS on 09 623 4600. Please restrict after hours calls to urgent matters.
## Appendix 1: Personal protective measures and equipment

### Table 1: Personal protection measures for workers who need to be in the workplace due to the nature of their role and associated risk level

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Measures</th>
<th>Hand hygiene</th>
<th>Social distancing</th>
<th>Cough and sneeze etiquette</th>
<th>Adequate ventilation</th>
<th>Masks</th>
<th>Gloves</th>
<th>Gown or apron</th>
<th>Eye protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower/medium</td>
<td>People who can maintain more than 1 metre contact distance from people with potential influenza or can implement protective barriers (e.g., respiratory, telephone triage personnel, pharmacy staff, orderlies, cleaners, and dieticians).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>People who, due to the nature of their job, may be unable to maintain more than 1 metre contact distance from people with potential influenza (e.g., police, prison staff, ambulance staff and health care workers).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Surgical</td>
<td></td>
<td>If direct contact likely</td>
<td></td>
</tr>
<tr>
<td>Medium/ higher</td>
<td>People who, due to the nature of their job, cannot maintain at least 1 metre contact distance from people with potential influenza (e.g., primary care personnel, emergency department staff).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Surgical</td>
</tr>
<tr>
<td>Higher</td>
<td>People who, due to the nature of their job, cannot maintain at least 1 metre contact distance from people with potential influenza AND have a high likelihood of potential contact with aerosolised respiratory secretions from invasive procedures—ventilation, sectioning etc (e.g., ICU staff, recovery room staff, people providing hands-on hospital care to people in droplet isolation).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N95/P2</td>
<td></td>
</tr>
</tbody>
</table>

Note: Basic principles: Hand hygiene, social distancing, safe cough/sneeze etiquette, and good ventilation constitute the basic principles for the prevention of influenza spread. The additional measures (i.e., the wearing of masks, gowns, gowns/aprons, and eye protection) should be subject to prudent workplace hazard or risk assessment. Masks. A range of masks are available to provide respiratory protection to workers in medium- to high-risk situations. These vary in the degree of protection offered, but essentially there are two options:

- Surgical masks, designed primarily to contain droplet spread from the wearer, but offering a degree of protection from external infection
- P2 or N95 particulate masks, which provide a higher degree of filtration of respiratory protection, when appropriately worn and handled.

The appropriate level of protection should be chosen for the degree of risk of infection remaining after all other control measures have been taken. In laboratory conditions, the relative effectiveness of these different measures is easily measured. However, in actual workplace settings, this is harder to measure, because of all the various factors that come into play, such as the degree of exposure to infection, how well the mask fits, hand contact with the mask and the wearer’s face and so on. These factors can greatly limit the effectiveness of even face masks that would otherwise offer a high degree of protection.

Information provided on the choice of masks and other protection measures is for guidance to assist employers and staff in specific workplace practices, based on current advice from CDC and WHO. Final decisions with regard to individual workplace risk rests with the employer. This document will be updated to reflect further technical information as it becomes available.